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# **LONG-TERM EFFECTS OF MOTHER- INFANT PSYCHOANALYTIC TREATMENT**

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# Long-term effects of mother-infant psychoanalytic treatment

## THESIS FOR DOCTORAL DEGREE (Ph.D.)

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# ABSTRACT

This thesis is a long-term follow-up study of mothers and infants with “baby worries” or mother-infant relational disturbances, who took part in a Randomized Controlled Trial when the children were, on average, five months of age. In that study, mother-infant psychoanalysis (MIP) yielded, compared with routine care (CHCC; Child health centre care), effects on maternal depression, mother-infant relationships, maternal sensitivity, and, on a marginally significant level, maternal stress. Out of the 80 randomized dyads, 66 were now followed up when the children were 4.5 years. The thesis had two main aims: (A) To compare the long-term efficacy of MIP and CHCC on child functioning on cognitive, social and emotional domains, attachment representations, and psychological well-being (paper I), and maternal distress, representations of the child and mother-child interactions (paper II), (B) To investigate the mothers’ (paper III) and the analysts’ (paper IV) experiences of MIP.

**Material/Methods:** (A) Mothers returned questionnaires on well-being and the child’s social and emotional functioning at a child age of 3.5. When the child was 4.5, I interviewed the child and the RCT researcher the mother. The child was assessed by the mother, the preschool teacher, external raters and myself. The mother’s well-being was rated via questionnaires and the inner representation of her child was rated from a semi-structured interview. Mother-child interactions were assessed via video-recordings. (B) This aim was approached by Thematic analysis of transcribed interviews with 10 randomized MIP mothers and their analysts after six months of treatment.

**Instruments:** The Ages and Stages Questionnaire: Social Emotional (ASQ:SE), the Children’s Global Assessment Scale (CGAS), the Emotional Availability Scales (EAS), the Edinburgh Postnatal Depression Scale (EPDS), qualitative assessments of the children (Ideal types), Machover Draw-a-person test, Story Stem Assessment Profile (SSAP), Strengths and Difficulties Questionnaire (SDQ), Symptom Check List-90 (SCL-90), Swedish Parental Stress Questionnaire (SPSQ), Wechsler preschool and primary scale of intelligence (WPPSI-III), Working Model of the Child Interview (WMCI) and information on background factors collected during interviews.

**Results:** (1) Effects in favour of MIP-children were found on the CGAS and the Ideal types. The mothers’ psychological well-being were at normal levels in both groups, but the MIP-mothers had lower depression scores at all follow-up time points, and their sensitivity normalized faster. (2) The qualitative analyses of MIP-mother interviews yielded two themes; (i) transition to motherhood (how she developed a maternal identity in which she also perceived her child as an individual) and (ii) relationships with the infant and family (how relationships with the infant, the father and persons in her past developed). Most mothers were positive to the analyst’s focus on the child but some lacked a clearer focus on their own problems. The analyst interviews yielded two themes; (i) mother and infant together in MIP (the analyst’s effort at establishing a balance between mother and infant) and (ii) cooperation in MIP (the analyst’s striving to establish contact with (“containing”) the mother and develop a therapeutic alliance).

**Conclusions:** MIP mothers had lower depression scores during the children’s first years and their sensitivity improved faster. This may explain why their children had better outcomes on two measures at 4.5 years; general functioning and psychological well-being. Both mothers and analysts reported positive experiences of MIP in general. The therapeutic alliance was reported to be essential. In some cases the method would need to be modified to focus more on the mother’s needs. The father took part in MIP in one or a few sessions. A future possibility could be to develop MIP to include the father.

**Keywords:** Mother–infant psychotherapy, postnatal depression, thematic analysis, RCT, ASQ:SE, CGAS, EAS, EPDS, Machover Draw-a-person, SSAP, SDQ, SCL-90, SPSQ, WPPSI-III, WMCI, Ideal types.

## LIST OF SCIENTIFIC PAPERS

- I. Winberg Salomonsson, M., Sorjonen, K., & Salomonsson, B. (2015). A long-term follow-up of a randomized controlled trial of mother-infant psychoanalytic treatment: Outcomes on the children. *Infant Mental Health Journal*. 36(1), 12-29.
- II. Winberg Salomonsson, M., Sorjonen, K., & Salomonsson, B. (2015). A long-term follow-up study of a randomized controlled trial of mother-infant psychoanalytic treatment: Outcomes on mothers and interactions. *Infant Mental Health Journal*. 36(6), 542-555.
- III. Winberg Salomonsson, M., Barimani, M. (2017). Mothers' experiences of mother-infant psychoanalytic treatment – a qualitative study. *Infant Mental Health Journal*. (in press).
- IV. Winberg Salomonsson, M., Barimani, M. Therapists' experiences of mother-infant psychoanalytic treatment – a qualitative study. (Submitted 2017).

# CONTENTS

<b>1</b>	<b>PREFACE .....</b>	<b>7</b>
<b>2</b>	<b>INTRODUCTION.....</b>	<b>9</b>
2.1	TREATMENTS OF BABY WORRIES .....	12
2.1.1	<i>Child health centre care (CHCC).....</i>	12
2.1.2	<i>Psychotherapeutic methods .....</i>	13
2.1.3	<i>Mother-infant psychoanalytic treatment (MIP) .....</i>	14
<b>3</b>	<b>LONG-TERM STUDIES ON CHILD DEVELOPMENT AND MOTHER- INFANT PSYCHOTHERAPY.....</b>	<b>16</b>
3.1	EPIDEMIOLOGICAL STUDIES .....	16
3.2	CONSIDERATIONS OF A FOLLOW-UP STUDY .....	16
<b>4</b>	<b>AIMS OF THE STUDY.....</b>	<b>18</b>
<b>5</b>	<b>OVERALL DESIGN OF THE INFANT AND FOLLOW-UP STUDIES.....</b>	<b>19</b>
5.1	SAMPLE AND DROPOUTS.....	21
5.2	PROCEDURE.....	22
<b>6</b>	<b>METHODOLOGICAL DISCUSSION .....</b>	<b>23</b>
6.1	THE QUANTITATIVE STUDIES (PAPERS I-II).....	23
6.1.1	<i>General considerations .....</i>	23
6.1.2	<i>Instruments used and methodological considerations .....</i>	26
6.1.3	<i>Statistics.....</i>	32
6.2	THE QUALITATIVE STUDIES (PAPERS III-IV) .....	33
6.2.1	<i>Validity issues .....</i>	34
6.3	TRIANGULATION .....	34
<b>7</b>	<b>ETHICAL CONSIDERATIONS .....</b>	<b>35</b>
<b>8</b>	<b>RESULTS .....</b>	<b>36</b>
8.1	LONG-TERM OUTCOMES ON CHILDREN AND MOTHERS (PAPERS I-II).....	36
8.1.1	<i>Paper I.....</i>	36
8.1.2	<i>Paper II.....</i>	39
8.2	QUALITATIVE INTERVIEWS WITH MOTHERS AND ANALYSTS (PAPERS III-IV) .....	Fel! Bokmärket är inte definierat.
8.2.1	<i>Paper III .....</i>	Fel! Bokmärket är inte definierat.
8.2.2	<i>Paper IV.....</i>	Fel! Bokmärket är inte definierat.
<b>9</b>	<b>GENERAL DISCUSSION .....</b>	<b>45</b>
9.1	SUMMARY: ANSWERS TO RESEARCH QUESTIONS.....	45
9.2	DISCUSSION OF QUANTITATIVE MEASUREMENTS AND RESULTS .....	45
9.2.1	<i>Paper I.....</i>	46
9.2.2	<i>Paper II.....</i>	49
9.3	DISCUSSION OF QUALITATIVE ASSESSMENTS AND RESULTS .....	49
9.3.1	<i>Papers III and IV.....</i>	49

9.4 THE ROLE OF THE FATHER .....	51
<b>10 CLINICAL CONCLUSIONS.....</b>	<b>53</b>
<b>11 STRENGTHS, LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH.....</b>	<b>54</b>
<b>12 SVENSK SAMMANFATTNING-SWEDISH SUMMARY .....</b>	<b>56</b>
<b>13 ACKNOWLEDGEMENTS .....</b>	<b>58</b>
<b>14 REFERENCES .....</b>	<b>59</b>



## LIST OF ABBREVIATIONS

ASQ:SE	The Ages and Stages Questionnaire: Social Emotional
BS	Björn Salomonsson
CPP	Child-Parent Psychotherapy
CGAS	The Children's Global Assessment Scale
CHC	Child Health Centre (in Swedish: BVC)
CHCC	Child Health Centre care
EAS	The Emotional Availability Scales
EPDS	The Edinburgh Postnatal Depression Scale
GSI	The General Severity Index of the SCL-90
ICC	Intraclass Correlation Coefficient
MIP	Mother-Infant Psychoanalytic treatment
MLM	Multilevel modelling
MWS	Majlis Winberg Salomonsson
PIR-GAS	The Parent-Infant Global Assessment Scale
PPD	Postpartum depression
RCT	Randomized Controlled Trial
SCL-90	The Symptoms Checklist -90
SDQ	The Strengths and Difficulties Questionnaire
SPSQ	The Swedish Parental Stress Questionnaire
SSAP	The Story Stem Assessment Profile
TA	Thematic analysis
WMCi	The Working Model of the Child Interview
WPPSI-III	The Wechsler Preschool and Primary Scale of Intelligence 3 <sup>rd</sup> ed.



# 1 PREFACE

When an infant is born, s/he evokes overwhelming feelings. Already in the womb, the fetus will give rise to fantasies and emotions in the future parents. For them, the world is forever changing. The transition from being a young adult to becoming a parent is a psychologically enriching but also vulnerable time. Many mothers and fathers have difficulties with this transition and develop psychological disorders. Often, they feel bewildered in this new situation. What happens when problems arise? Do parents and families get adequate help? Daniel Stern, the well-known infant researcher, expressed his doubts in these terms: "The family, society and culture do not provide the new mother with the experience, training or adequate support for her to execute her maternal role easily or well" (Stern, 1995, p. 174).

Modern research findings indicate that the fetus and the newborn child are actively communicating with the environment. The infant's attachment behaviour is considered to start immediately after birth (Marvin, Britner, & Russell, 2016). We can see, for example, in the Still Face experiment (Tronick, Als, Adamson, Wise, & Brazelton, 1978) how a baby only a few months old reacts with strong emotions to an interruption of the communicative flow with the mother. This illustrates the infant's immediate reactions to a change in the emotional climate. Thus, we can rephrase our questions in the previous section and ask, not only how parents but also infants can get help with their distress.

Early on in my professional career, I was trained in helping somewhat older children in distress. I became a child psychotherapist and later a psychoanalyst. I also started teaching developmental psychology and child psychotherapy at the Erica Foundation and Stockholm University. I met with children and parents in great distress. The children were of different ages, from toddlers to adolescents. Over the years, I got interested in how life had begun for these families, and how they had coped with the task of forming a family. Lately, this wish to learn more about the first year of life led me to work as a consultant at a Child Health Centre in Stockholm.

I also had the opportunity to follow a study for a thesis, "Baby Worries": A randomized controlled trial of mother-infant psychoanalytic treatment (Salomonsson, 2010). This project was initiated by Björn Salomonsson (BS). It investigated when everyday infant problems had turned into "baby worries". This term referred to when mothers felt that their babies were crying inconsolably, constantly refusing the breast, or "never" falling asleep. These worries also included mothers who felt depressed, anxious, or uncertain about motherhood and their relationship with the infant. A sample of 80 mother-infant dyads were recruited and randomized to psychoanalytic treatment, Mother-Infant Psychoanalysis (MIP) or to Child Health Centre Care (CHCC). The MIP group also continued regular care at the CHC. Six months later, the second interviews and assessments revealed certain effects in favour of MIP. This study will henceforth be called "the infant study".

BS realized the potential of investigating how these children and their mothers developed later on. This resulted in a quantitative follow-up study, which is the *first focus* of my thesis. The *second focus* is to investigate how mothers and analysts had experienced MIP treatment, a question approached through qualitative analysis. For the follow-up study, I and BS met with the mothers and children who had participated in the infant study and still consented to take part. This took place when the children were 4.5 years old. My clinical experience was of great help when I planned the design, formulated the research questions, selected the tests and assessments, and interviewed the children. All mothers and psychoanalysts gave their

consent to participating in the study and I have taken careful steps to conceal details and make any identification impossible.

## 2 INTRODUCTION

Mothers and infants are closely connected, both in a biological and a psychological sense. Problems can emerge from either participant and will often affect them both. New mothers may be hesitant about their maternal role and feel anxious, depressed, or bewildered because their new life as parents did not turn out as expected. About half of all mothers get the “baby blues” during the first postpartum week (Henshaw, 2003) and 8-15% are afflicted by postnatal depression (Gaynes, Gavin, Meltzer-Brody, Lohr, Swinson, Gartlehner, et al., 2005; O'Hara & Swain, 1996; Rubertsson, Waldenström, Wickberg, Rådestad, & Hildingsson, 2005; Wickberg & Hwang, 1997; Woolhouse, Gartland, Mensah, & Brown, 2014; Johansson, Svensson, Stenström, & Massoudi, 2016). In their review, Gavin et al. (Gavin, Gaynes, Lohr, Meltzer-Brody, Gartlehner, & Swinson, 2005) found as many as 19.2% having a depressive period during the first 3 months postpartum. In contrast, postpartum psychosis is estimated to affect 1-2% of mothers, although this figure is uncertain (Jones, Chandra, Dazzan, & Howard, 2014).

Depression in mothers of infants is a risk factor for problems of social emotional functioning further on in childhood (Downey & Coyne, 1990; Goodman, Rouse, Connell, Broth Robbins, Hall, & Heyward, 2011; Moe, Braarud, Wentzel-Larsen, Slinning, Tranaas Vannebo, Guedeney, et al., 2016). In an Australian study on mothers with postpartum depression (PPD), Giallo et al. (Giallo, Woolhouse, Gartland, Hiscock, & Brown, 2015) found that their 4-year-old children were twice as likely to have emotional-behavioural difficulties than children of mothers with minor emotional symptoms. In their review, Stein et al. (Stein, Pearson, Goodman, Rapa, Rahman, McCallum, et al. 2014) found that maternal perinatal psychiatric disorders were associated with disturbances in development and psychological well-being in the children, even if the effect sizes were not very high. These effects can also reach into adolescence. In a longitudinal study, Korhonen et al. (Korhonen, Luoma, Salmelin, & Tamminen, 2012) found that maternal prenatal and postnatal depression constituted a risk to adolescent boys' well-being and concurrent depressive symptoms a risk for both boys' and girls' well-being. A study by Murray et al. (Murray, Arteche, Fearon, Halligan, Goodyer, & Cooper, 2011) found that children of postnatally depressed mothers were at an increased risk for depression when they had reached 16 years of age. Verbeek et al. (Verbeek, Bockting, van Pampus, Ormel, Meijer, Hartman et al. 2012) also found associations of maternal PPD with adolescents' internalizing problems.

### *Psychoanalytic and attachment theories of early development*

The cited studies point to substantial statistical connections between the mother's and the infant's distress. They also invite new questions, namely, how to *psychologically* interpret these connections. To answer, I will submit some interpretations rooted in psychoanalytic and attachment theories. In the beginning of life, the infant is completely dependent on his/her caretakers. In the psychoanalytic perspective, Freud (1925-1926) described the baby's state as one of helplessness, *Hilflosigkeit*. He referred not only to the anxiety at being separated from mother but also to the distress due to the infant's lack of resources of dealing with the internal drives. Thus, in Freud's view the threats to the baby's emotional balance come both from the outside world and from within. In order to help the child handle these threats, the mother is of paramount importance. In one of his last writings, Freud brought up the significance of the mother-infant relationship when he suggested that to the baby, the mother is "unique, without parallel, established unalterably for a whole lifetime as the first and strongest love-object and as the prototype of all later love relations" (1938, p. 188).

Melanie Klein (1946) developed Freud's theories by applying her experiences of psychoanalyses with toddlers and older children. She clarified that the baby's helplessness is not only related to biological immaturity but also to a tendency to split the *maternal object* into good (gratifying) and bad (frustrating) parts. By this term, Klein referred not only to the baby's vision of the actual mother's behaviour but, more importantly, how s/he created an *internal object* of the mother with good and bad aspects. For example, the baby could feel loveable and awful by turns, alterations that were not necessarily caused by the mother's behaviour but rather by various aspects of the internal object that were predominant for the moment. Thus like Freud, Klein emphasized what was going on *inside* the baby's mind, rather than what went on *between* mother and child. She did not expound much on how the mother's emotional state and behaviour had an impact on the child, a theme developed by Bion (1962). He extended Klein's (1946) concept of *projective identification* to describe the normal communication between mother and infant. Its function was for the child to project feelings of helplessness into the mother to evacuate them there. Bion used the concepts of *Container* and *Contained* to describe this process, whereby the mother receives the child's projections, processes them internally, and then returns them to the child in communicative forms on a higher level of symbolization. If a mother's containing function is non-optimal, as might be the case in depression, this could affect the child's possibility to evacuate projections or helplessness. Like the previous authors, Bion did not elaborate a theory of the external mother's impact on the baby. His focus was rather to describe how the mother could help the child handle his/her anxieties.

Winnicott was a pediatrician and psychoanalyst who took into account both the child's and the mother's interactive contributions, that is, *their relationship*: "There is no such thing as an infant. Whenever one finds an infant one finds maternal care, and without maternal care there would be no infant" (Winnicott, 1975, p. XXXVII). In his view, when the infant is looking into mother's eyes s/he sees her/himself. This constitutes the mother's "mirroring" of the baby. In order to develop optimally, the child requests such response from her. We can also call it a kind of confirmation by the mother. If she can cope with this need and mirror the child in her behaviour and comments she is, in Winnicott's definition, a "good-enough mother" (1971a).

Another psychoanalyst essential for our understanding of the relationship between mother and child is Selma Fraiberg (1989). She used the expression "ghost in the nursery" (Fraiberg, Adelson, & Shapiro, 1975) to describe a transgenerational pattern where the parent's projections emanating from own past experiences may distort the present interactions with the infant.

I will now turn to attachment theory, which covers how Bowlby (1969) conceived of the mother-child relationship, ideas later developed by Ainsworth et al. (Ainsworth, Blehar, Waters, & Wall, 1978) and many others (Fonagy, 2001; Lyons-Ruth, 2003; Sroufe, 2005). Bowlby's thinking was rooted in psychoanalytic theory, but he was also critical of its emphasis on the sexual drive and its meek interest in empirical studies to confirm theory. Efforts have been made to link attachment and psychoanalytic theories of the mother-infant relationship (Fonagy, 2001). Psychoanalytic critics have claimed that attachment theory does not explicitly take into account the unconscious phenomena considered significant for understanding the interplay between mother and child (Zepf, 2006). Attachment theory has adapted to this demand by instituting the term "internal working models" (Bretherton, 2005; Pietromonaco & Feldman Barrett, 2000).

Daniel Stern (1985) illustrated with his experiments how attachment is built up in the dyad's communications. He introduced the term "affect attunement" to describe the mother's task of

picking up and adapting to the baby's signals. This can be compared to Winnicott's concept of maternal mirroring. An attuned mother goes beyond merely imitating the child's expressions. She enters into a new kind of behaviour, where she matches "not the other person's behavior per se, but rather some aspect of the behavior that reflects the person's feeling state" (p. 141). If we apply this to a mother with her infant, she will empathize with the child and convey her understanding on a level matching that of the child. Returning to the depressed mother, her ability to attune to the infant's communications is hampered by her lack of energy and preoccupation with her low self-esteem and sense of overwhelming problems (Field, Healy, Goldstein, & Guthertz, 1990; Tronick & Weinberg, 1997; Tronick, 2007b).

Links between observational studies of infants and psychoanalytic theory were forged already in the 1940's by Spitz (1965). In his studies of early deprived children, he linked his observations of their despondent and depressed state to psychoanalytic theory. He introduced the concept of "anaclitic depression" for the infant's reactions to emotional deprivation (Spitz & Wolf, 1946). According to Spitz, the child will show signs of serious, sometimes irreparable, damage in emotional development if the deprivation lasts more than four to five months. More recent studies of the effects of early deprivation have been performed on institutionalized small children in Romania (Rutter, Sonuga-Barke, Beckett, Castle, Kreppner, Kumsta, et al., 2010). Duration of deprivation showed to be closely associated with severity of attachment disorder.

#### *The child's contribution*

So far, I have focused on the mother's impact on her infant and the importance of the relationship with the child. In order to look more closely at *the child's contribution* we now leave psychological theories and turn to experimental psychological research that observes the child through visible and audible behaviour. These researchers have shown that the infant is an active participator in interplay with the surrounding environment (Beebe & Lachmann, 2002; Brazelton & Als, 1979; Stern, 1985). Already the newborn prefers his/her own mother's language to others (Moon, Cooper, & Fifer, 1993) and her voice to that of other women (DeCasper & Fifer, 1980). These phenomena are probably instigated in utero (Moon, Lagercrantz, & Kuhl, 2013; Voegtline, Costigan, Pater, & DiPietro, 2013).

Trevarthen and Aitken (2001) use the concept of "primary intersubjectivity", indicating that the infant is born with a specific receptivity to subjective states in others, mainly the mother. In the already mentioned Still Face experiment, Tronick et al. (1978) demonstrated another aspect of this receptivity; the infant often reacts with powerful distress when this intersubjective communication is disrupted. When the mother suddenly gets silent and keeps her face motionless the baby becomes bewildered, anxious, or sad. Another way of demonstrating small children's painful reactions to separation from caregiver is the Strange Situation Procedure (Ainsworth et al., 1978). The child is left alone or with a stranger in a room and his/her often stressful reactions to separation and reunion are noted.

Another research tradition emphasizes that children are born with different *temperaments* (Buss & Plomin, 2014; Thomas, & Chess, 1977), a term which implies a constitutional way of reacting emotionally. In this interpretation, a child with a high level of negative emotions will tend to affect the mother negatively. Children who are socially withdrawn, shy etc. may have a dampening or worrying impact on the mother. In response, she may feel obliged to increase her efforts to reach her child or feel rejected and withdraw from her baby. Child and mother will thus influence each other and a vicious circle - or a virtuous one - may start. Braarud et al. (Braarud, Slinning, Moe, Smith, Vannebo, & Guedeney, 2013), who found that maternal depressive symptoms and infant social withdrawal behaviour were related, reflect

that “the presence of maternal depressive symptoms might be associated with infant withdrawal, or conversely, that infant social withdrawal, whatever its cause, would raise parental concerns and grievance” (p. 538). The word “conversely” indicates the circular movement between mother and child and that no single party is responsible for starting the dysfunctional interaction. Modern neuroscience provides a physiological basis for understanding this notion of circularity. The discovery of the mirror neurones in the 1990s (Gallese, Eagle, & Migone, 2007; Gallese, 2009; Iacoboni, 2009; Lenzi, Trentini, Pantano, Macaluso, Iacoboni, Lenzi, et al., 2009) opened up a new field for exploring the infant’s and the mother’s capacity for imitation, empathy, and emotional interaction.

### *Mother-infant interaction*

I started this section with Freud’s theories about the baby’s mind. Like Klein and Bion, he was not in direct contact with clinical infants. In contrast, Winnicott met with babies and mothers in consultations and built his theories on these meetings. Later, the child’s contributions to the interaction with mother was emphasized (Stern, Tronick, Beebe) and we ended up describing this as a circle without beginning and end. This led to a challenge to study the interaction between mother and infant. Such studies have become increasingly common (Beebe, Lachmann, & Jaffe, 1997; Field, 2002; Stern, 2008; Tronick, 2007a,b). In conclusion, when we take care of - and study in a research project - an infant who indicates distress, we need to focus on three targets; the baby, the mother, and their relationship. This complexity was the reason why the infant study used the term “baby worries” as an inclusion criterion, rather than “maternal depression” or “infant disorder”. This threefold definition did not merely address a clinical problem but also indicated which directions measurements must take in research; they need to address the well-being of both mother and child as well as their interaction. This chart was continued in the follow-up study, as will be expounded in chapter 6.1 on methodology. A similar threefold route is recognized in parent-infant health care and psychotherapy, a field I will now approach.

## **2.1 TREATMENTS OF BABY WORRIES**

### **2.1.1 CHILD HEALTH CENTRE CARE (CHCC)**

In Sweden, Child Health Centres (CHC, “BVC” in Swedish) have been functioning as routine primary care units since almost a century. They offer checkups for parents and babies from birth to six years of age. Nurse calls with parent and child follow a schedule; from weekly in the beginning, then monthly and every second month during the first year. Checkups will follow at 1.5, 3, 4 and 5 years. These checkups include weighing and measuring the baby, providing inoculations, nutritional advice, and pediatric checkups. Screenings of the child’s social, verbal and motor abilities are added as the child grows older. Almost all families with small children in Stockholm are supported by the CHCs (Stockholms Läns Landsting, 2014).

The CHC nurses also seek to help parents with baby worries. They provide developmental guidance (Lojkasek, Cohen, & Muir, 1994) on the child’s physical, psychical, and social development, both in individual contacts and in parental groups (Mittag, 2009). They also help the parents establish a good contact with their child. They are instructed, often also specially trained, to use the Edinburgh Postnatal Depression Scale (EPDS; Cox, Holden, & Sagovsky, 1987) to detect maternal depression. This is done at a child age of six weeks. When needed, they can offer further treatments such as infant massage (Field, 2000) and specific help with nursing problems or an appointment to a pediatrician or a psychologist. When problems are vast, psychotherapy may be needed. Such methods will be summarized in the next section.



### **2.1.2 PSYCHOTHERAPEUTIC METHODS**

Parent-Infant Psychotherapy (PIP), developed at the Anna Freud Centre in London (Baradon, Biseo, Broughton, James, & Joyce, 2016), is rooted in attachment theory and Fraiberg's (1989) theories and clinical work with mothers and children. A recent RCT (Fonagy, Slead, & Baradon, 2016) compared outcomes of PIP with standard care for infants and parents with mental health problems and high levels of social adversity. At 12 month's follow-up, PIP showed better results on mothers' psychological well-being and their representations of the infant but not on the infants or parent-infant interactions.

The watch, wait and wonder technique (WWW; Lojkasek et al., 1994) is an infant-focused therapy with mother and child. The mother is encouraged to observe her baby and reflect on their relationship. The therapist "engages in a parallel process of watching, waiting, and wondering about the interactions between mother and infant" (Cohen, Muir, Parker, Brown, Lojkasek, Muir, et al., 1999, p. 437). In a study by Cohen et al. (Cohen, Lojkasek, Muir, Muir, & Parker, 2002) comparing WWW with mother-infant therapy according to Fraiberg on 73 dyads, WWW showed better results in improving attachments, mother-child relationships, development, and maternal satisfaction.

Psychodynamic Mother-Infant Psychotherapy (Robert-Tissot et al., 1996) is based on Fraiberg's (1980) theories and work with mother and child. It aims at "uncovering the impact of maternal conflict on the perceptions the mother has of the child, with attendant distortions in the interactions" (Robert-Tissot, Cramer, Stern, Serpa, Bachmann, Palacio-Espasa, et al., 1996, p. 99). The technique is further presented by Cramer et al. (Cramer & Palacio Espasa, 1993; Cramer, 1998). The therapist tries to maintain a "joint focal attention" (p. 156) on mother and infant to promote a mother-infant relationship that is as free as possible from projective distortions. In an RCT, Robert-Tissot et al. (1996) compared this treatment with Interaction Guidance (McDonough, 2004). They found pre-post treatment effects on mother's and infant's well-being and dyadic interactions, but with no between-group differences.

Child-Parent Psychotherapy (CPP; Lieberman et al., 1991) is a treatment for mothers and children under five years. The method has been developed for parents and children who experienced interpersonal trauma (Lieberman & Van Horn, 2008; Lieberman, Van Horn, & Ippen, 2005). CPP builds on Fraiberg's theories and is described as "a multitheoretical approach that integrates attachment, psychoanalytic, and trauma theory with intervention strategies derived from cognitive behavioral and social learning therapies" (Lieberman & Van Horn, 2008). In randomized clinical trials, CPP improved functioning in both child and caregiver in violence-exposed families (Lieberman et al. 2005; Toth, Rogosch, Manly, & Cicchetti, 2006). Stronach et al. (Stronach, Toth, Rogosch, & Cicchetti, 2013) randomized 137 thirteen-month-old maltreated infants and their mothers to CPP, psychoeducational parenting intervention, or community standard. At follow-up 12-months after treatment, the CPP children had higher rates of secure attachment.

Video-recordings are also used in treatments of mother and infant (Beebe, 2003; Jones, 2006; Woodhead, Bland, & Baradon, 2006). In the Marte Meo technique (Hedenbro, 1997) video-films are used to help the mother perceive her interaction with the child. Also in the Interaction Guidance (McDonough, 2004) the therapist uses video-recordings and focuses on the "infant-caregiver relationship rather than on either the infant or the caregiver alone" (McDonough, 2004, p. 79). Hoffenkamp et al. (Hoffenkamp, Tooten, Hall, Braeken, Eliëns, Vingerhoets et al. 2015) found that Video Interaction Guidance helped parents of preterm infants to enhance sensitive behaviour and diminish withdrawn behaviour. Vik and Hafting (2006) found that talking about what they saw on the video-film helped mothers to change their self-image.

A systematic Cochrane review (Barlow, Bennett, Midgley, Larkin, & Wei, 2015) reported on studies comparing parent-infant psychotherapy with no treatment, treatment as usual and alternative treatments. The eight studies included showed that parent-infant psychotherapy seemed to improve the attachment status of infants of mothers experiencing problems; however, there were no differences in studies comparing outcomes of parent-infant psychotherapy with other treatment methods. Incidentally, the infant study was one of few studies that received optimal ratings concerning design and minimization of bias.

### **2.1.3 MOTHER-INFANT PSYCHOANALYTIC TREATMENT (MIP)**

#### **2.1.3.1. The method**

Mother-infant psychoanalytic treatment (MIP) is another psychotherapeutic method for mothers and infants. It was developed by a Swedish psychoanalyst, M.D. Johan Norman in the late 1990s. Together with him, a group of clinicians of the Swedish Psychoanalytic Association implemented the method. Its aim was to provide mothers and infants in psychological distress with a modified form of psychoanalytic therapy with a focus on the infant. This clinical group met regularly for many years. After Norman's demise in 2005, the seminars continued as a peer group discussing clinical work and theoretical issues (Bertell, 2013). In MIP treatment, mother and baby are considered to take an active part and relate to the analyst. Norman viewed the mother as the primary caretaker. However, as will be seen from my studies III and IV, in this sample the father sometimes participated in treatment sessions. The following list is based on Norman's (2001, 2004) description of the method and can be regarded as a manual for the MIP treatments at the time of the infant study (cited from Salomonsson, 2010, p. 14):

- "The analyst seeks to establish a therapeutic relationship with the baby.
- The analyst assumes that the infant will use his primary intersubjectivity (Trevarthen & Aitken, 2001) to obtain containment (Bion, 1962).
- The analyst assumes that the baby processes non-lexical aspects of interventions.
- The analyst assumes that the "fluidity of the infant's personality" (Winnicott, 1941) will enable him to change faster than older children and adults.
- The analyst helps the baby to release the affects behind symptoms. In this process, he regards the mother primarily as a collaborative partner.
- In response to the analyst-baby interaction, the mother's 'primary maternal preoccupation' (Winnicott, 1956) will help her to understand the baby and establish a healthier relationship.
- Should the mother's personal conflicts interfere with infant development or the therapy process, the analyst will speak with her about them.
- The analyst regards the mother as more salient than the father in developing and healing psychopathology in young infants. His participation is accepted but may obscure focus on the analyst-infant and mother-infant relationships.
- Analytic containment, that is, acceptance, focus and interpretation of painful affects, are pivotal for the therapeutic process.
- Encouraging, supportive and guiding interventions do not play a major role."

To sum up, MIP starts by the analyst establishing contact with the child, helping him/her release affects behind the symptoms. Then the mother may understand her infant better and they are able to establish a better relationship.

### **2.1.3.2. The infant study of MIP and CHCC**

*The infant study* (Salomonsson & Sandell, 2011a, b) was an RCT in which 80 dyads were randomized to MIP or CHCC. Since all mothers were also supported by the CHCC, the MIP group also received CHCC. They were recruited by nurses at Child Health Centres and via advertisements at the delivery ward at the Karolinska University Hospital and at parental sites on the Internet. A naturalistic procedure for recruitment was used; the mother should report “baby worries”; concern about herself as a mother, about the infant’s well-being, and about her contact with the baby. This self-selection procedure was in contrast with other outcome studies, which often used questionnaires or external ratings of maternal pathology (Murray, Cooper, Wilson, & Romaniuk, 2003; Cooper, Murray, Wilson, & Romaniuk, 2003). The rationale of self-selection is supported by Ellingson et al. (Ellingson, Briggs-Gowan, Carter, & Horwitz, 2004) who found that “parental worry is a robust predictor of help seeking among parents of children with behavioural problems” (p. 766).

Further inclusion criteria were that the problems had lasted more than two weeks, the infants were below 18 months, the family lived in the Stockholm area and the mother mastered Swedish well enough to take part in treatment. Exclusion criteria were maternal psychosis and substance dependence to the extent that collaboration did not seem possible.

Six months after treatments started, the MIP group showed better results on maternal depression, mother-infant relationships, maternal sensitivity, and, on a marginally significant level, maternal stress. No differences were found on mother-rated assessments of the infants’ psychological well-being or externally rated infant interactive contributions. These results opened up new questions: Why were there no between-group effects on the infants, and would the ones found on the mother remain some years later? These questions were the main arguments for the first focus of the thesis; the follow-up study. Before reporting on it, I will discuss the rationale of long-term studies in general and the choice of child age in a follow-up investigation.

# **3 LONG-TERM STUDIES ON CHILD DEVELOPMENT AND MOTHER-INFANT PSYCHOTHERAPY**

## **3.1 EPIDEMIOLOGICAL STUDIES**

Today, many longitudinal epidemiological studies show that psychological distress in infancy can imply long-term negative consequences for the child's development. The Avon study (O'Connor, Heron, Golding, Beveridge, & Glover, 2002) found that already antenatal maternal anxiety predicted behavioural/emotional problems in children at 4 years of age. Laucht et al. (Laucht, Esser, & Schmidt, 1997) studied infants born with biological and psychosocial risks; the Mannheim Study of Risk Children followed their later developmental disorders up to school age. Psychosocial risks, such as broken homes and parental psychological distress in infancy, played an increasingly negative role for the child's cognitive and social-emotional development. In a cohort study of 211 Copenhagen families, Skovgaard et al. (Skovgaard, Olsen, Christiansen, Houmann, Landorph, & Jørgensen, 2008) found that parents' negative expectations of the infant recorded in the first months of the child's life predicted relationship disturbances at 1.5 years.

Sroufe (2005) investigated children in Minnesota, US. The antecedents of attachment and the qualities of attachment relationships at multiple observational assessments were studied between birth and 30 months, and frequent assessments thereafter throughout childhood and adolescence. At follow-ups of the preschool children, who were of the same age as in the present follow-up study, they studied their peer interactions. Children with a history of secure attachment in infancy showed more positive affective expressions with peers, in comparison with the ones with anxious attachment histories.

These studies reveal how psychosocial risk, negative parental expectations, and early attachment problems negatively affect the child's development. Any treatment that can affect these factors positively on a long-term basis would thus be welcome. The infant study had found short-term effects of the MIP. The present study investigates if they were enduring.

## **3.2 CONSIDERATIONS OF A FOLLOW-UP STUDY**

The infant study found that mothers in MIP seemed to benefit from treatment compared with the ones in CHCC. In contrast, no effects were demonstrated on the babies. A major question was if this reflected that there were no actual baby effects, or if it pointed to problems in measuring the functioning of small children. Bagner et al. (Bagner, Rodríguez, Blake, Linares, & Carter, 2012), in their review of assessments of infants' emotional and behavioural problems, found that parent-reported questionnaires and observational coding procedures had substantial psychometric evidence. Yet, they also emphasized the need of further research in the field. Salomonsson & Sleded (2010) showed a difficulty for depressed mothers to rate the infant's functioning independently of their personal well-being. The mothers' assessments of the child on the ASQ:SE seemed to reflect their personal well-being rather than the child's condition as rated by external raters. Thus, the validity of mother-report questionnaires of an infant's functioning may be brought into question, since the mother's emotional state can obscure her rating of the child. To sum up, the fact that the infant study failed to show any between-group effects on the babies could not be taken as proof that the MIP treatments had no direct effects on them. If measurement of infant well-being thus is an uncertain matter, another alternative exists; to approach them again when they have reached an age when it is possible to measure their well-being without having to

rely solely on parental reports and external ratings, that is, when the children can report on their well-being by themselves. This was a major rationale for the follow-up study. The question then arose which age would be suitable for such a follow-up. This subject will now be approached.

Many studies measure outcomes only 6 -12 months after parent-infant therapy (Cohen et al., 2002; Letourneau, Stewart, Dennis, Hegadoren, Duffett-Leger, & Watson, 2011; Fonagy et al., 2016; Robert-Tissot et al., 1996). One drawback of such a design is that a short follow-up period will measure only transient changes immediately post treatment. I therefore decided to approach the children again at 4.5 years of age. The average lapse of time from end of treatment would thus be 3.5 years. A few studies have used the same time span. Haabrekke (2015) investigated Norwegian children born to mothers with opioid- and poly-substance abuse problems who had received help during pregnancy, though not psychotherapy. The index group was compared with one group of children and mothers who had mental health problems except substance abuse, and one low-risk group without problems. The children in the index group showed more caregiver-rated internalizing and total problems than the low-risk children at 4.5 years of age.

A British outcome study with a lengthier follow-up period was presented by Murray and collaborators (Murray et al., 2003; Cooper et al., 2003). In an RCT of short- and long-term effects of psychological treatment of PPD, they assessed the children's emotional, behavioural and cognitive development up to 5 years. I will return to this study in more detail in section 9.

My reasons for choosing 4.5 years were as follows; at this stage, the mothers were thought to have consolidated a maternal identity, establish routines in child care, resume work, and possibly conceive or even bear another child. The child would have left toddlerhood and found his/her role in preschool. As for the child's ability to take part actively in a test situation, I relied on the following arguments. The child's capacity to use narrative activity to create meaning develops between 3 and 6 years of age (Wolf, 2003). In the middle of this period, at 4.5 years, children can take part in narrative tests that involve play and language. Now they understand language and can express themselves verbally. Their ability to socialize and be curious about other people is also more developed. Most of them are able to separate from mother to be alone with an interviewer. All these factors enabled me to meet with the child and use a comprehensive test battery.

## 4 AIMS OF THE STUDY

The aims were:

(A) To compare the long-term efficacy of MIP and CHCC on:

- (1) outcomes of child functioning on cognitive, social and emotional domains, attachment representations, and psychological well-being (paper I)
- (2) outcomes on maternal distress and representations of the child (paper II)
- (3) outcomes of mother-child interaction (paper II)

(B) To investigate the mothers' (paper III) and the analysts' experiences (paper IV) of working in MIP and what they found rewarding and challenging in that work.

## 5 OVERALL DESIGN OF THE INFANT AND FOLLOW-UP STUDIES

The design of the infant and the follow-up studies is presented in Figure 1. Note that the dyads in MIP treatment also visited their local CHC. The MIP interventions consisted of a median of 23 sessions, with 2 to 3 hours per week.

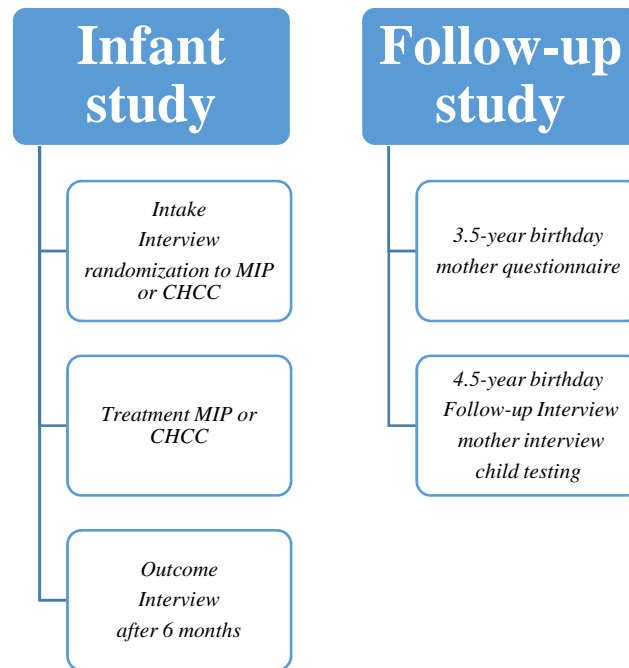


Figure 1. Design of the infant and the follow-up studies. From paper III.

The children reached 4.5 years from October 2009 to June 2012. I (MWS) interviewed the child. I had not taken part in the infant study and was held blind concerning case histories, treatment assignments, and individual results. I was only informed of the child's age and first name. The other interviewer (BS), who meanwhile assessed the mothers, had interviewed all cases in the infant study. He had not taken part in treatments or clinical discussion groups.

An overview of the data collection in the infant and the follow-up studies is listed in Table 1.

Table 1. Data collection. An overview of data collection in the infant study and the follow-up study. For abbreviations, see next page.

Areas	Instrument	Informant	Data collector	Raters	Time points
<i>Child cognitive functioning</i>	WPPSI-III	Child	MWS	MWS*	4.5 years
	Machover Formal	Child	MWS	External	4.5 years
<i>Child social and emotional functioning</i>	Machover Emotional	Child	MWS	External	4.5 years
	ASQ: SE	Mother	Questionnaire	---	Infancy + 6 months later, 3.5 years + 4.5 years
	SDQ	Mother	Questionnaire	---	4.5 years
	SDQ	Preschool teacher	Questionnaire	---	4.5 years
	CGAS	Child and mother	MWS	MWS**	4.5 years
<i>Child representation of attachment</i>	SSAP	Child	MWS	External	4.5 years
<i>Child Ideal types</i>	Ideal types	Child	MWS	MWS	4.5 years
<i>Mother depression</i>	EPDS	Mother	Questionnaire	---	Infancy + 6 months later 3.5 years + 4.5 years
<i>Mother psychiatric distress</i>	SCL-90	Mother	Questionnaire	---	Infancy + 6 months later 3.5 years + 4.5 years
<i>Mother stress</i>	SPSQ	Mother	Questionnaire	---	Infancy + 6 months later 3.5 years + 4.5 years
<i>Mother working model of child</i>	WMCI	Mother	BS	External	4.5 years
<i>Mother-child interaction</i>	EAS	Mother + child	Video	External	Infancy + 6 months later + 4.5 years
<i>Mother-child relationship</i>	PIR-GAS	Mother + child	BS	BS	Infancy + 6 months later



Abbreviations: ASQ: SE = the Ages and Stages Questionnaire: Social – Emotional; BS = Björn Salomonsson; CGAS = the Children's Global Assessment Scale; DAP = the Draw a Person test; EAS = the Emotional Availability Scale; EPDS = the Edinburgh Postnatal Depression Scale; MWS = Majlis Winberg Salomonsson; PIR-GAS = the Parent-Infant Global Assessment Scale; SCL-90 = the Symptom Check List; SDQ = the Strengths and Difficulties Questionnaire; SPSQ = the Swedish Parental Stress Questionnaire; SSAP = the Story Stem Assessment Profile; WMCI = the Working Model of the Child Interview; WPPSI III = the Wechsler Preschool and Primary Scale of Intelligence.

\* in collaboration with Agneta Thorén

\*\* in collaboration with Anna Lundh

## 5.1 SAMPLE AND DROPOUTS

In paper I, the flow-chart illustrating all participants in the infant-study and the follow-up study including the dropout cases was presented (Figure 2).

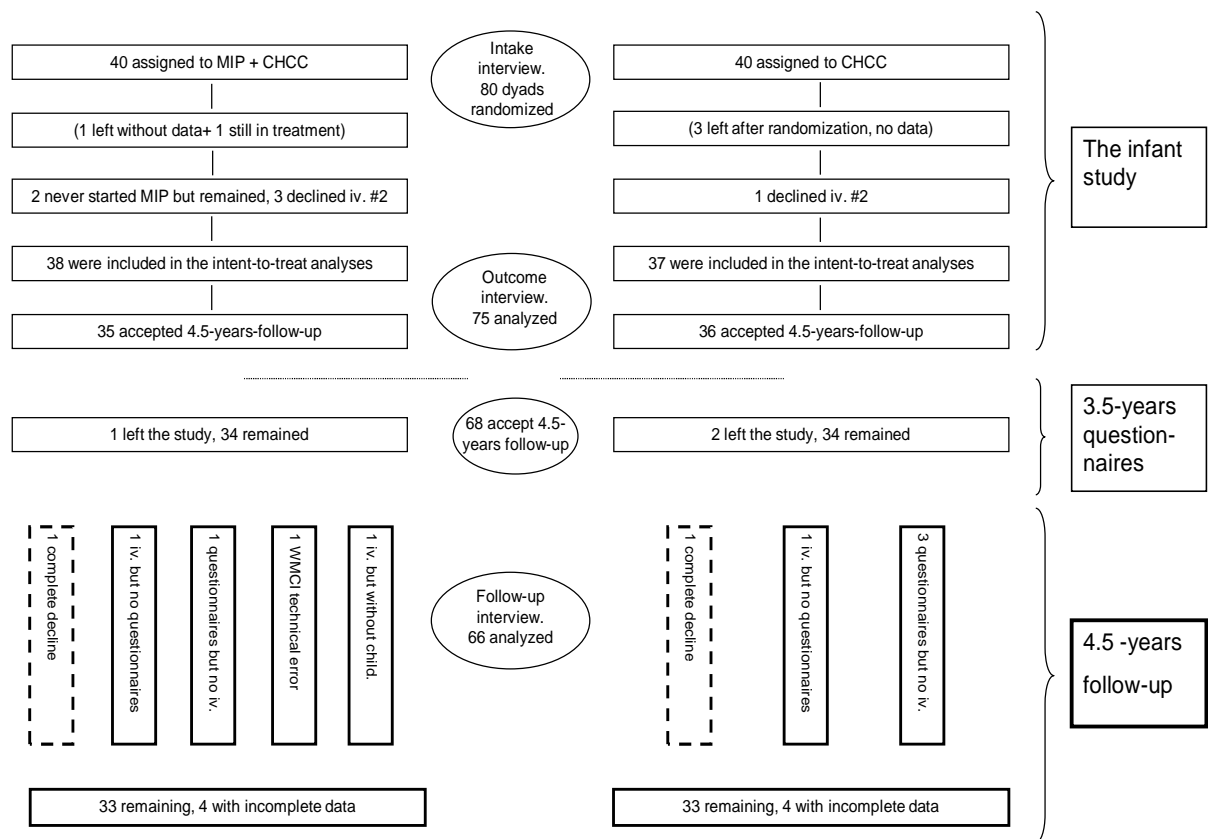


Figure 2. Participants including the dropout cases. From paper I.

The infant study initially comprised 80 cases. During the entire investigation period, there were 14 dropout cases; 7 MIP cases and 7 CHCC cases. Thus, the response rate was 82.5%. Table 2 shows a detailed overview at which time point the dropout occurred.

Table 2. Dropout cases and time points.

	At interview 1	At interview 2	At 3.5 years	At 4.5 years
Number of cases	75	71	68	66
Dropouts	5	4	3	2

## 5.2 PROCEDURE

Data were collected through individual interviews with mother and child, questionnaires, child tests, and video-recordings of parent-child interactions. In paper I, the following figure (3) presented the procedure of the interview.

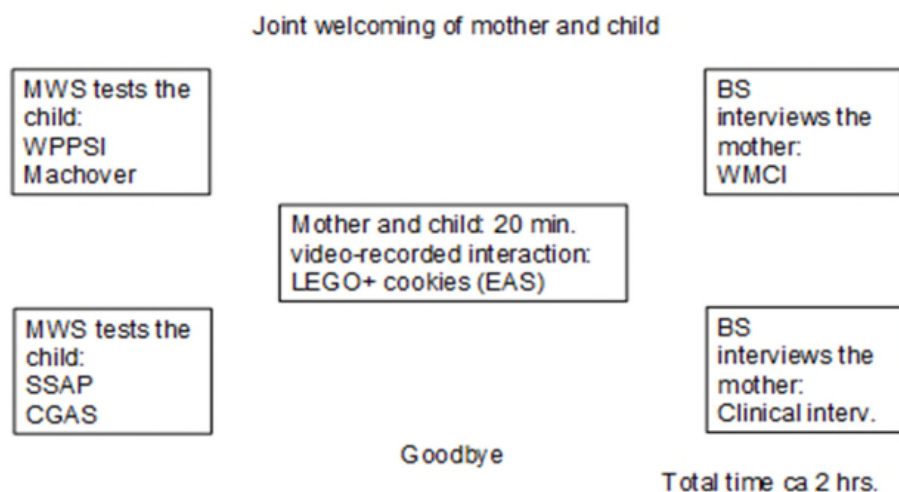


Figure 3. The interview procedure. From paper I.

In order to make the child acquainted with the setting and the interviewer, the interview always began with a brief joint meeting with mother and child and the two interviewers. Thereafter, interviews with mother and child took place in two adjacent rooms. After the first one-hour-long part of the interview, mother and child reunited for 20 minutes to play with LEGO and to have cookies and lemonade. This video-recorded sequence formed the basis of the assessments of mother-child interaction. Individual interviews with mother and child were then resumed for another 30 minutes.

## 6 METHODOLOGICAL DISCUSSION

My study is a follow-up of the infant study, an RCT performed 2005 - 2008. Since my sample's inclusion criteria and specificities were directed by this study, I will expand on my description of the infant study in section 2.1.3.2. The sample constituted a socially relatively well-adjusted group with few single mothers and an educational level somewhat above the average. Eighty percent of the mothers and 64% of the fathers were first-time parents. However, from a psychiatric point of view, they were vulnerable and burdened. More than 50 % of the mothers had a history of psychiatric disorders in adulthood, and 17.5 % had suffered from psychiatric disorders during childhood and adolescence (Salomonsson & Sandell, 2011a). Some mothers got additional support during the study period: In the MIP group, two mothers met with a CHC psychologist and two were on antidepressants. In the CHCC group, 12 mothers received various forms of brief therapeutic interventions a/o antidepressants.

### 6.1 THE QUANTITATIVE STUDIES (PAPERS I-II)

#### 6.1.1 GENERAL CONSIDERATIONS

To assess small children and their caretakers, different investigation methods are used; most frequently, developmental tests, parent interviews, open or semi-structured interviews, questionnaires and rating scales, and assessments of the parent-child relationship (Cohen et al., 2002; Skovgaard, Houmann, Landorph, & Christiansen, 2004). Assessments of the child are made through interviews with the parents and cognitive developmental tests of the child, most often the Bayley scales (Bayley, 1969). Attachment is measured through the Strange Situation Procedure (Ainsworth et al., 1978). Most studies use video-taped sessions for coding the interaction between mother and child (Cohen et al., 2002; Lieberman et al., 1991; Robert-Tissot et al., 1996; Santelices, Guzmán, Aracena, Farkas, Armijo, Pérez-Salas et al., 2011).

For older children, other measurements are used. In the study by Murray et al. (2003), the assessments were conducted with a general measurement of cognitive development at five years; the McCarthy Scales of Children's Abilities (McCarthy, 1972). Questionnaires for mothers and teachers regarding emotional and behavioural development were also used. No face-to-face assessments were made of the children's emotional and behavioural development.

When approaching the question which measurements to use I selected, when possible, the ones already used in the infant study. This was advantageous since it enabled using the same instruments across several time-points. In addition, I selected methods suitable for 4.5 year olds. Reverting to the cited studies, I noted that their child measurements mostly consisted of parents' and teachers' ratings of external behaviour. Thus, they were not performed in a direct contact with the children. I decided to take a different path and assess the children comprehensively, that is, not only through the eyes of the mothers. One reason has already been provided; maternal ratings of the child's functioning have problems with validity. Many studies counter this drawback by also asking preschool teachers to give their picture of the child. I set out to follow this tradition by including reports by the preschool teacher as well. Furthermore, I decided to assess the children myself through various methods and by getting into a dialogue with them. In that effort, I aimed to assess not only external behaviour, manners, and performance. Also, I wanted to get to know how s/he looked at her/himself and perceived the world.

The problem is that if one asks a 4.5 year old about his/her well-being, s/he will often give brief answers, such as shrugging the shoulders or saying “OK”. This will not provide enough information for a valid assessment. So, I opted for this approach; to personally interview each child. To, furthermore, get an overall picture of the children’s development, I selected more elaborate measurements in the design. The considerations included the following:

*Several sources of information:* Both mothers and preschool teachers evaluated the children on questionnaires. This is a common procedure in studies of children (Kazdin, 2003). Its rationale is that each rater assesses the child from his/her vantage point and with a bias but when judged ensemble, they will provide a more credible measurement. Thus, one argument for my decision to interview the children was to add a third rater of their social and emotional functioning.

*Several instruments:* To rate the children’s cognitive, social and emotional functioning, I chose a battery of questionnaires, cognitive tests, and various projective tests. For the mothers, three questionnaires were used to estimate their well-being, and a semi-structured interview was conducted to investigate their mental representations of their children and their views of the child’s functioning.

*Implicit and explicit measurements:* The test battery reflected my wish to combine measures that, apart from their varying technical characteristics, can be sorted under the categories *explicit* or *implicit*. Explicit measures are the ones that “best predict conscious attitudes and goal-directed behaviours”. Implicit measures, in contrast, “predict spontaneous behaviours that are exhibited ‘mindlessly’, without conscious awareness” (Josephs & Bornstein, 2011, p. 423). Explicit measures are, for example, questionnaires where the respondent is forced to pinpoint conscious opinions and views by quantifying them. For example, in the SDQ the mother is asked to answer “not true”, “somewhat true” or “certainly true” about her child on items like: “Often unhappy, down-hearted or tearful” or “Generally liked by other children”. Implicit measures cover behaviours and attitudes that are not consciously conceived by the respondent but are assessed by a rater or an interviewer.

*Interview with the child:* When I was alone with the child, I could get into direct contact and get an impression of him/her. The child got an opportunity to express him/herself in words and play. I could, for example, observe how s/he behaved in an unfamiliar situation, how s/he reacted when separated from mother, his/her way of contacting me, and how s/he responded to instructions. The child interviews also enabled me to assess their personal characteristics. My experience as a child psychologist made it natural to adapt to the child’s language and level of development.

*Assessments in stressful and calm conditions:* The child interview was devised to collect data in conditions that would feel safe, consistent, and free of external stimuli. Inevitably, it also implied that the child was submitted to a stressful situation, since s/he was separated from mother to meet with an unknown person and his/her achievements were being tested. Of course, the child might feel this was unpleasant but, from a research point of view, it was clearly an asset. I was examining children who had been submitted to emotional stress during infancy. All mothers had experienced “baby worries” at the time, and at least half of the babies had shown signs of distress. The major point with the follow-up study was to investigate their present level of distress. The interviews could bring out the child’s *latent* distress, which I consider was conducive for understanding the child’s overall functioning.

In contrast, the interviews could only provide insufficient information on the children’s everyday functioning at home, in preschool, with friends and relatives, and in the playground.

To inquire more deeply into such functioning, I relied on questionnaire assessments by the mothers and the preschool teachers. A third source of information was the interviews by BS with the mothers. The mother was asked about the child's daily functioning. I took part of transcripts of their responses to include them as one of the sources for the CGAS ratings.

*Tests of typical versus maximal performance:* Looking from another angle at the considerations above on the choice of data sources and instruments, we can apply a distinction by Cronbach (1990). He distinguished between tests of *typical performance* (personality, attitudes etc.) and of *maximal performance* (skills, intelligence etc.). A typical performance test assesses the child's daily functioning, such as putting on the clothes, behaviour at mealtime, etc. A maximal performance test submits the child to stress and thus also gives an indication of his/her stress tolerance. I conclude that the ratings by mother and teacher focused more on typical performance, whereas tests executed during the interviews were more likely to reflect maximal performance.

The index treatment of this study, MIP, was assumed to help mother-infant dyads achieve a better emotional and social functioning and improve their central relationships. In contrast, cognitive functioning was not assumed to be influenced by therapy. The reason I included such a test was to avoid the risk that any possible between-group differences would confound the therapy outcomes. Later, I observed that this test (WPPSI-III; Wechsler, 2002; Wechsler, Tideman, & Hagelthorn, 2005) also gave valuable background information for the global assessments, such as the child's perseverance, reaction under stress, and ability to concentrate.

*Reusing instruments at several measurement points.* The mother's assessment of the child (ASQ:SE) and of her well-being (EPDS, SCL-90, SPSQ) had been used twice in the infant study and were now re-used at 3.5 years and at 4.5 years. The EAS could only be reused at 4.5 years, since at 3.5 we did not meet with mother and child. Using several measurement points allowed us to follow the progress of ratings on one and the same instrument. On the other hand, there was a risk of systematic test-retest effects. However, we estimated that such risks were not very high since three to four years had passed between the assessments. All in all, I considered the advantages of reapplying identical instruments at several time-points to outweigh the disadvantages.

There was another question regarding using the same instrument on babies of 6 months and preschool children of 4.5 years; it was hard to know if the instruments actually measured the same functioning. For example, one would expect very different skills and emotions in a baby and a preschool child. Yet, the constructors of the ASQ:SE, (Squires, Bricker, & Twombly, 2002) claim that it is possible to conceive of emotional and social functioning as traversing various age-appropriate levels that can be measured by one and the same instrument. Of course, this requires that one uses age-adapted versions of the questionnaire. The EAS instrument covers six domains that are considered to be relevant between 0 to 14 years (Biringen, Batten, Neelan, Altenhofen, Swaim, Bruce, et al., 2010; Easterbrooks & Biringen, 2009). The mother domains are, evidently, conceptually identical across the child's age span: sensitivity, structuring, and non-intrusiveness. Ratings of non-hostility never reached reliability in the infant study and was omitted in the follow-up as well. The child domains, responsiveness and involvement, are expected to be present both in a baby and a preschool child though their manifestations will be quite different. Thus basically, the procedure was the same in the infant and the follow-up studies; mother and child were asked to be together for a limited amount of time, ten minutes and twenty minutes, respectively. In the follow-up study, we added a task to make it more relevant for mother and child; they were asked to assemble a toy and play with it. The fact that the two had been in a similar situation four

years earlier ought not to give a systematic retest effect, since the mother would experience being with her baby quite differently from assembling LEGO with her preschooler.

*Measuring the children's attachment.* Psychotherapy also aims at positively influencing attachment, for example, through uncovering the obstacles to achieving secure relationships. Choosing the story stem technique was a result of my efforts at finding an age-appropriate measure of the child's attachment to his/her caregivers. When the child elaborates on the story stem, s/he will inevitably reveal much of how s/he experiences the world and her/his close relations. At bottom, this will provide an image of which kind of attachment style is most predominant. In research, one has to standardize the setting and the instructions. A common method is the Story Stem Assessment Profile (SSAP; Hodges, Steele, Hillman, Henderson, & Kaniuk, 2003) where the child is told brief standardized stories containing conflictual themes such as jealousy, loneliness, envy, obedience, etc. This method offered an opportunity to assess the child's inner relational representations (Emde, Wolf, & Oppenheim, 2003).

*Ascribing characteristics to the children's personalities.* Psychodynamic therapy aims at influencing a patient's personality by observing and making explicit how his/her internal world is constituted. Since I investigated effects of such a therapy, I was interested in getting a picture, not only of the child's emotional well-being, behaviour and psychosocial functioning, but also of "the inside of his/her mind". One major challenge in research on children is to find measures that allow them to reflect on their life situation (Emde et al., 2003); what the child thinks of his/her everyday life, parents, friends, and siblings, as well as more philosophical subjects such as the future, life, death, feelings, etc. Such questions cannot be put directly to a child. If the child is to tell us about him/herself more extensively, a special and child-adapted methodology is needed. Play may be used as a therapeutic communicative mode as well as a diagnostic tool. In child psychotherapy, this comes about spontaneously in the therapeutic relationship. As a researcher, I had to devise a more stringent method. I chose to create Ideal types (Wachholz & Stuhr, 1999; Kächele, Schachter, & Thomä, 2009) on the basis of several measurements and my own experiences of the child. They provided qualitative information about the child's individuality, internal strengths and problems. This will be described in detail under 6.1.2.1.4.

## **6.1.2 INSTRUMENTS USED AND METHODOLOGICAL CONSIDERATIONS**

### **6.1.2.1. The child**

Ratings of the child were made from four sources; the mother, the preschool teacher, the interviewer and external raters.

The child's emotional, social and cognitive functioning were rated by:

*The mother:* Ages and Stages Questionnaire: Social – Emotional (ASQ:SE; Squires et al., 2002), Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997)

*The preschool teacher:* SDQ (Teacher version)

*The interviewer of the child:* Wechsler Preschool and Primary Scale of Intelligence, 3<sup>rd</sup> ed. (WPPSI-III; Wechsler et al., 2005), Children's Global Assessment Scale (CGAS; Shaffer, Gould, Brasic, Ambrosini, Prudence, (Bird, Canino, Rubiostiepec, & Ribera, 1987), Machover Draw-a-person test (Blomberg & Cleve, 1997), Story Stem Assessment Profile (SSAP; Hodges et al., 2003).

#### **6.1.2.1.1 INTELLIGENCE**

The *Wechsler Preschool and Primary Scale of Intelligence* (WPPSI-III) is a test of intellectual functioning in young children. The current edition is designed for children 2;6 - 7;3 years. It consists of 14 subtests that are subsumed under composite scores, including Full-Scale IQ, Verbal and Performance IQ, Processing Speed Quotient, and General Language Composite.

For the age range of the children in this study, seven subtests have to be administered. Following the guidelines, a test battery was set up including the following subtests: Block Design, Information, Matrix Reasoning, Vocabulary, Picture Concepts, Comprehension and Coding. It allowed me to set up composite scores on three domains: Full-Scale IQ, Verbal and Performance IQ. Thus, I could get a picture of the child's capacity on verbal and performance tests. The constructor's suggested order of administering subscales was followed.

Though the WPPSI-III was not intended as an outcome measure, it also revealed information about the child's perseverance, concentration, task orientation, and stress tolerance. This information was included in the CGAS as well as the Ideal types assessments.

In using the WPPSI:III, I collaborated with a child psychologist with vast experience in this field, Agneta Thorén. I also consulted with the researcher who standardized the Swedish version, Eva Tideman (Wechsler et al., 2005).

#### **6.1.2.1.2 SOCIAL-EMOTIONAL FUNCTIONING**

The index therapies focused on emotional issues in mother and infant. It was therefore essential to examine the effects on the child's social and emotional functioning. The mother assessed it through the *Ages and Stages Questionnaire: Social – Emotional* (ASQ:SE), a set of parent-completed questionnaires designed to identify developmental problems in infants and children up to five years of age. It focuses on the child's social and emotional behaviour in the areas of self-regulation, compliance, communication, adaptive behaviour, autonomy, affect, and interactions with people. It gives the parent's picture of the child on items such as: "Does your child like to hug you?" and "Does your child cry, scream, or have tantrums for long periods of time?" The instrument is widely used and shows good reliability (Squires, Bricker, Heo, & Twombly, 2001; Squires, Bricker, & Twombly, 2004). Internal consistency was, .91 for five-year-olds in the constructors' study (Squires, Bricker, Heo, & Twombly, 2002). Test-retest reliability was .94. Our internal consistency was .80 for 3.5 year-olds and .81 for 4.5 -year-olds.

Mothers and preschool teachers assessed children with the *Strengths and Difficulties Questionnaire* (SDQ; Goodman, 1997, Goodman, 2001). This test is used for screening early signs of psychic illness in children aged 3-16 years. It exists in several versions: for parents, teachers and, for children above 11 years, also as a self-rating scale. Thus, it complemented the mothers' reports on the ASQ:SE by capturing how the teachers perceived the preschoolers. It was distributed only at 4.5 years when the mother was interviewed and could be asked for consenting to the teacher-report version. The SDQ contains 25 propositions covering the child's prosociality, hyperactivity, emotional symptoms, conduct problems, and peer problems. The score range is 0 to 50, with 0 indicating the most optimal score. The SDQ is widely used and reports good reliability and validity (Goodman, 2001, Smedje, Broman, Hetta, & von Knorring, 1999). A study by Goodman (2001) reported an internal consistency on .73. For the SDQ-M our internal consistency was .82, and .84 for the SDQ (Teacher version).

The *Children's Global Assessment Scale* (CGAS) is a clinician-rated global rating of psychosocial functioning. It allows "the rater to assimilate and synthesize his or her knowledge about many different aspects of the patient's social and psychiatric functioning, and condense it into a single clinically meaningful index of severity of disturbance" (Shaffer et al., 1983, p. 1228). The assessments do not rely on diagnostic terms but on descriptions of functioning and symptoms. The score range is 0 to 100, with 0 being the least optimal. In the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), the CGAS was used for children and adolescents. Although the DSM-5 uses the WHO-scale "the WHO Disability Assessment Schedule", the CGAS is still of current interest when assessing outcome of treatment. In Sweden, there has been a special interest in using the CGAS in clinical work. Analyses of reliability and validity (Lundh, 2012) proved it to be useful for evaluating outcomes. Anna Lundh introduced a training course to improve the assessments. I took part in this course and made all evaluations in collaboration with her as an expert rater.

Weissman et al. (Weissman, Warner, & Fendrich, 1990) performed a 2-year follow-up study on children with depressed and non-depressed parents. They found substantial reliability between CGAS based on interview with the child and external information, but only moderate reliability between CGAS based on interview with the mother and external information. A possible explanation was that depressed mothers were influenced by their own depression when they described their children. This would be another example of the inevitable difficulty in receiving valid assessments of children by their mothers, as mentioned in section 3.2

CGAS is widely used in Swedish child psychiatric settings (National Board of Health and Welfare, 2009). Previous research has established cut-off points of 60/61 and 70/71 (Shaffer et al., 1983; Bird et al., 1987; Bird, Yager, Staghezza, Gould, Canino, & Rubio-Stipec, 1990). Below 61 points is considered a definite case, 61 – 70 a probable case, and above 70 a probable non-case. This categorisation has been used in several prevalence studies of mental disorders (Bird, Gould, & al., 1993; Milne, Garrison, Addy, McKeown, Jackson, & Cuffe, 1995). We applied these cut-off points as well. A test-retest reliability after six months of .85 was reported by Shaffer et al. (1983). Validity studies with other measures have also been performed (Bird et al., 1987; Mathiassen, Brondbo, Waterloo, Martinussen, Eriksen, Hanssen-Bauer et al., 2012; Schorre & Vandvik, 2004; Sourander & Piha, 1997). A study by Lundh et al. (Lundh, Kowalski, Sundberg, Gumpert, & Landén, 2010) reported an intra-class correlation coefficient (ICC) .73 among untrained raters and .92 among trained raters. In our study, since I made the ratings in collaboration with another rater, no reliability measurements could be executed.

To assess the children's emotional functioning I also used a projective test, the *Machover Draw-a-person test*. Children have various means of revealing their cognitive functioning and self-image. In the Machover test, the child is asked to draw one person and then another one of the opposite sex. Some questions are posed in connection with the first drawing, such as "How old is she/he? Does she/he have friends? What are her/his three major wishes?" Thus the child can give an indirect picture of her/himself, how s/he looks upon her/himself and her/his relations to others.

The Machover test is based on children's pleasure in making drawings, which can help us understand their body perception, wishes and conflicts. It has been suggested that Machover can only be used in combination with other tests, since there are very few data on reliability and validity (Smedler & Tideman, 2009). Interpretations of the drawings and the child's stories need to be put in context with other measurements. It has been widely used by child psychologists but has not been much evaluated in research (Smith & Dumont, 1995).



However, in their investigation of children of traumatized parents, Daud et al. (Daud, Skoglund, & Rydelius, 2005) used it to assess their emotional state. Lately, Gernhardt et al. (Gernhardt, Keller, & Rübeling, 2016) have used children's family drawings to assess attachment representations across cultures. Karen Machover (1949, 1951) considered that the child who makes a drawing of a person thereby expresses his/her own impulses, fears, conflicts and compensating strategies. She did not provide an elaborated theoretical discussion of this assumption but presented rich clinical material to illustrate it.

Blomberg and Cleve (1997) standardized the Machover test for Swedish children. In collaboration with them, I created two dimensions for the purpose of the present study; Machover Formal and Machover Emotional. The Machover Formal was defined as the age adequacy of the first drawing's formal aspects. As described in paper I (p.16), it targeted "the completeness and wealth of details of the human body, and the coherence of the drawing". The scoring was made on an ordinal scale, which implied: 1 = below age, 2 = age adequate, and 3 = above age. The Machover Emotional was defined as "the level of regulation of emotions expressed in the drawing and in the child's accompanying comments, in other words, the child's capacity to handle emotional material linked with the drawing" (p.16). Also for Machover Emotional, the scoring implied three levels: 1 = emotions handled non-adequately, 2 = emotions handled adequately, and 3 = emotions handled creatively. The ratings were made by Blomberg and Cleve.

Concerning the Machover test, we compared 15 assessments by the two raters. Intercoder agreement was calculated; Spearman's  $\rho = .81, p < .001$  for Machover Formal and Spearman's  $\rho = .81, p < .001$  for Machover Emotional alike.

#### **6.1.2.1.3 ATTACHMENT**

The *Story Stem Assessment Profile* (SSAP) is a story stem method. Several such tests exist, for instance, the MacArthur Story Stem Battery (Bretherton & Oppenheim, 2003). Solomon and George (2016) reported that in the majority of infant studies, attachment is measured by the Strange Situation Procedure (Ainsworth et al., 1978). Children in middle childhood and adolescents are often tested with questionnaires (Target, Fonagy, & Shmueli-Goetz, 2003; Target, Fonagy, Shmueli-Goetz, Datta, & Schneider, 2007; Venta, Shmueli-Goetz, & Sharp, 2014). However, for our age-group, 4.5 year-olds, neither of these measurements were relevant. The story stem test proved to be likeable and interesting to the children and enabled them to reveal their attachment representations. In this test, the child is asked to respond to a set of story stems with the help of a set of toys. A stem contains the beginning of a story, often about a familiar dilemma, for example: "Once there was a little pig and it lived here with all the other pigs. And the cows lived here, the lions lived here... etc. One day the little pig went for a long walk. He went a long way, past the cows and the lions etc. Then he said Oh! Oh! I'm lost. I can't see the other pigs! I don't know how to get back" (Hodges et al., 2003, p. 364). The child is then asked, "Show me and tell me what happens now". This allows an assessment of the child's perceptions of family roles. The child is thus not asked direct questions but may nevertheless convey his/her inner perceptions and expectations about attachments and relationships. The story stem offers the child verbal and non-verbal means of communicating feelings, anxieties and expectations.

The coding of the SSAP has been manualized (Hodges, Hillman, Steele, & Henderson, 2002). Each story completion is rated on a 3-point rating scale. These points are then collected into one score for each attachment dimension; secure, avoidant, ambivalent, and disorganized. High scores are optimal for the secure and non-optimal for the other dimensions. The constructors regard the scores as reflecting continuous variables. The

constructors arrange regular courses in administration and coding of the test. Together with the main rater, I took part in these courses.

The SSAP builds upon a rich tradition of child therapy (Blake, 2008; Winnicott, 1971b). The narratives can be regarded from three aspects: representations (self and others), plot (a problem or tension followed by a resolution) and discourse (specific conversation with another person). The themes of the stems concern “the child’s expectations of relationships between parents and children. These include giving affection and setting boundaries, as well as the ones central to the construct of attachment security; whether the child displays an expectation that parents will be aware when s/he needs protection or comfort and will respond appropriately” (Steele, Hodges, Kaniuk, & Steele, 2009). The stories also indicate the child’s ways of handling aggression and defences, as well as sibling and peer relationships.

An external and trained rater scored all transcripts from video-recorded sessions. Inter-rater reliability was assessed on 15 children by comparing with the interviewer’s scores. The ICC’s exceeded .88. The outcome analyses used the external rater’s scores.

#### **6.1.2.1.4 CHARACTERISTICS AND PSYCHOLOGICAL WELL-BEING**

So called *Ideal types* (Wachholz & Stuhr, 1999; Kächele et al., 2009) were also used to describe the essential characteristics of the children in this study. This is an inductive procedure of analysing data (Philips, Werbart, Wennberg, & Schubert, 2007; Philips, Wennberg, & Werbart, 2007) where I extracted a few concise descriptions out of all the cases, that is, a kind of qualitative clustering that “units observable phenomena and concepts in an interpretative or exploratory schema” (Kächele et al., 2009, p. 122).

An Ideal type cannot be found in reality (Philips, Wennberg, & Werbart, 2007; Philips, Werbart, Wennberg, & Schubert, 2007) but is nevertheless generalizable. The interviewer uses his/her subjective emotional reactions to the interviewee as well as objective observations (Lindner, Fiedler, Altenhofer, Götze, & Happach, 2006). I hesitate to apply such an operationalized concept as “personality” to a 4.5 year-old child. On the other hand, we often characterize children as cheerful, gloomy, shy, quarrelsome, etc., adjectives which subsume the child’s *personality characteristics and psychological well-being*. My meeting with the child provided ample opportunities of getting various impressions of him/her, whether they arose when just chatting with the child or when assembling data for the CGAS, the Machover, the SSAP, and the WPPSI-III assessments. I assembled and labelled these impressions via personally invented words. These “Ideal types” did not aim to ascribe *numbers* to the levels of functioning or psychopathology. Rather, they described the child’s individuality in idiosyncratic *words*. I first sketched formulations such as “curious”, “don’t you get inside me”, “a good girl”, “a fighter”, “full of ideas”, “a troublemaker”, “scared”, and “precocious”. In a second step, I compared these catchwords across all children with the aim of reaching a limited number of descriptors. As described in paper I (p. 19) I opted for four types:

The *Open* child was defined as “lively, confident and open in the interview. The child was often relaxed, constructive and creative in his/her play, and took initiatives. The mood was mostly happy or cheerful”.

The *Orderly* child seemed “competent, kind, and often a bit moderate. Sometimes s/he was strict or inhibited. S/he seemed expectant, cautious or task-oriented with the interviewer. The mood was often neutral”.

The *Anxious* child showed “overt anxiety, inhibition, or marked shyness. S/he often had pronounced difficulties in separating from mother and demanded her to stay with the interviewer in a craving or clinging way. Sometimes the child was restless. The capacity for attention seemed to vary with the level of anxiety”.

The *Provocative* child was described as “annoying, sometimes rejecting the interviewer’s instructions. S/he could also be overtly aggressive or spiteful. The mood was often irritable, anxious, or cocky”.

I then compiled the four groups into two overarching types; the *OK* children and the *Troubled* children. The two terms represented a clinical impression of each child based on his/her behaviour, rather than a strictly defined diagnosis. To express it differently, the terms reflected whether or not the child raised my clinical concern regarding his/her present or future emotional state. The OK type comprised the Open and Orderly children and the Troubled type covered the Anxious and Provocative children.

The Ideal types constituted a qualitative measure and thus, inter-coder agreement was calculated. An external child psychotherapist rated 15 video-recorded interviews. For the four types we calculated Cohen’s  $\kappa = .71, p < .001$  and for the two overarching types Cohen’s  $\kappa = .62, p = .010$ .

### **6.1.2.2. The mother**

#### **6.1.2.2.1 MAJOR LIFE EVENTS**

In a semi-structured interview with BS, the mother was asked about major life-events since the time of the infant study. The questions pertained to divorce, the birth of new siblings, unemployment, and psychiatric or somatic disorders and treatments of mother, father, or child.

#### **6.1.2.2.2 MOTHER’S WELL-BEING**

The mother’s well-being was rated by the same questionnaires as in the infant study: The *Edinburgh Postnatal Depression Scale* (EPDS; Cox et al., 1987) rated maternal depression. It is widely used at Swedish CHCs and has been validated on samples in Sweden (Wickberg & Hwang, 1996; Wickberg & Hwang, 1997; Rubertsson et al., 2005; Edhborg, Lundh, Seimyr, & Widström, 2003; Seimyr, Edhborg, Lundh, & Sjögren, 2004). Its psychometric properties have been shown to be satisfactory (Cox et al., 1987; Murray & Carothers, 1990). Our values for Cronbach’s  $\alpha$  at 3.5 and 4.5 years, respectively, were .83 and .87.

The *Swedish Parental Stress Questionnaire* (SPSQ; Östberg, Hagekull, & Wettergren, 1997) was used to measure maternal stress, which is known to influence child development (Essex, Kraemer, Armstrong, Boyce, Goldsmith, Klein et al., 2006; Faught, Bierl, Barton, & Kemp, 2007; Mäntymaa, Puura, Luoma, Salmelin, & Tamminen, 2006; Pelchat, Bisson, Bois, & Saucier, 2003). It is essentially a Swedish version of the Parenting Stress Index (PSI; Abidin, 1990) with 35 items. It has documented appropriate psychometric properties (Östberg et al., 1997). Our overall Cronbach’s  $\alpha$  at 3.5 and 4.5 years, respectively, were .89 and .91.

The *Symptom Check List-90* (SCL-90; Derogatis, 1994) in its Swedish version (Fridell, Cesarec, Johansson, & Malling Thorsen, 2002) was used to measure the general level of psychopathology. It is a self-report questionnaire with 90 items rated 0-4. The General Severity Index (GSI), or the mean across items, were included in the analyses. Internal

consistencies ranged from .82 to .96 (Derogatis, 1994; Fridell et al. 2002), whereas our Cronbach's  $\alpha$  at 3.5 and 4.5 years, respectively, were .97 and .97.

#### **6.1.2.2.3 INTERNAL REPRESENTATIONS OF THE CHILD**

The mother's internal representations of her child were rated by an external professional, who based her ratings on transcriptions of video-recorded interviews. We used the *Working Model of the Child Interview* (WMCI; Zeanah, Benoit, & Barton, 1986), a semi-structured one-hour interview with standardized questions. The rater had been trained and certified in the method. She classified all maternal representations into balanced, disengaged, or distorted. As described in paper II (p. 6) "in a *balanced* representation, the parent is genuinely interested in the child and appreciates his/her "subjective experiences, and values the relationship with the child and the child's individuality" (Vreeswijk, Maas, & van Bakel, 2012; p. 315). *Disengaged* representations are marked by indifference, emotional distance, impoverished content and intellectualization. *Distorted* representations are marked by age-inappropriate expectations, insensitivity, and often a predominance of negative and/or idealized representations with negative and/or discrepant or ambivalent emotions, parental self-focus, and lack of narrative coherence". To increase power in the statistical analyses, the disengaged and distorted categories were collapsed into "nonbalanced representation" (Zeanah, Benoit, Hirshberg, Barton, & Regan, 1994). We were justified in doing this, since in clinical samples both categories "imply that parents react insensitively toward their infants" (Vreeswijk et al., 2012, p. 4).

To check intercoder agreement for the WMCI, another external and certified child psychologist rated 15 interviews. Comparison with the main rater yielded a Cohen's  $\kappa$  of .72,  $p < .001$ .

#### **6.1.2.3. The interaction**

Concerning the mother-child interactions, the infant study had used the *Emotional Availability Scales* (EAS; Biringen, Robinson, & Emde, 1998). Since this instrument is also applicable to 4.5-year-old children, it was advantageous to use it a third time. I used the same two uninformed raters as in the infant study. At the time of the follow-up study, the EAS had been further developed by its constructor (Biringen, 2009) into a fourth edition. The raters underwent training with her and were then certified. Comparisons across all measurement points of the infant and follow-up studies were possible since I divided each raw score by its range of its dimensions. An equalized score of 0 indicated the most non-optimal, and 1 the most optimal, score. Inter-rater reliability was checked; one rater assessed all videos, and a second rater assessed one third of the sample. Cronbach's  $\alpha$  varied on the various dimensions between .71 and .87.

### **6.1.3 STATISTICS**

All statistical analyses were conducted using SPSS, versions 21.0 (paper I) and 22.0 (paper I). As reported in paper I "scores were considered to be univariate outliers if z-transformed scores exceeded 3.29,  $p < .001$ , two-tailed test (Tabachnik & Fidell, 2007). Three such scores were removed. Multivariate outliers were identified by calculating Mahalanobi's distance through a multiple regression analysis; no such cases were found. Missing data were very rare except for the SDQ (Teacher version)" (p. 19). Here we missed data from one fifth of the cases due to mothers not wanting to involve the teachers.

Multilevel modeling (MLM) was used when analysing outcomes on the five variables with several measurement points, in paper I: the ASQ:SE and in paper II: the EAS, the EPDS, the

SPSQ, and the GSI of the SCL-90. For all variables with only one measurement point at 4.5, we used Mann-Whitney U tests,  $\chi^2$  tests, and t-tests.

In paper II, I reported on the size and significance of mediated effects. They “were calculated with the Mplus 7.11 statistical software, using maximum likelihood with robust *SEs* estimation and the Model Indirect command (Muthén & Muthén, 1998-2012)” (p. 7).

## 6.2 THE QUALITATIVE STUDIES (PAPERS III-IV)

The results of the first two studies (papers I-II) led to my interest in studying the mothers’ and the analysts’ experiences of the MIP therapies (papers III-IV). Since mothers and children seemed to benefit from MIP in various ways, it would be relevant to examine how the participants experienced the treatment, from both sides, so to speak. Six months after treatment started, all mothers and analysts had been interviewed by BS. To examine the experiences of MIP, ten transcribed interviews were selected with a random number generator (<https://www.random.org>) and then analysed in detail (Bryman, 2016) (paper III). Then we selected the corresponding interviews with the analysts (paper IV). This allowed me to compare the experiences of mothers and analysts in each therapy.

I will now describe how the interviews were conducted. A semi-structured format (Bryman, 2016) was used, which was expected to generate spontaneous emotional expressions and enable systematic data collection. Questions were posed in an order that suited the situation, since it was important to follow the participants’ lead to understand their experiences of MIP. The interviews were video-recorded (mothers) or audio-recorded (analysts) and transcribed verbatim by a project assistant. Each interview lasted around one hour.

The interviewer’s questions were based on an implicit agenda covering various areas. The mothers were asked how they had experienced the results of MIP and the contact with the analyst. They were also encouraged to describe what had emerged during sessions and the ways in which the analyst implemented MIP and if they had any thoughts about how the baby might have experienced the sessions. The interviewer’s questions to the analysts covered areas such as what they thought was facilitating and obstructing in the MIP method and how they had experienced the contact with the mother and the results. The interviewer also asked what had emerged during sessions and how the analysts implemented MIP and what they thought about the contact with the infant. Whenever a study participant expressed doubts or uncertainties, the interviewer explored further to uncover latent ideas about MIP.

There are many methods of performing qualitative analysis. One widely used is grounded theory, which was introduced by Glaser and Strauss (1967). The common goal of such an analysis is to generate a theory of the phenomena that are grounded in the data. Since I had no intention of theory-building per se, I opted for thematic analysis (TA) (Braun & Clarke, 2006; Braun & Clark, 2012). Braun and Clarke describe TA as “a method for identifying, analysing and reporting patterns (themes) within data...and [it] interprets various aspects of the research topic” (2006, p. 79). Data are coded in order to identify themes. The themes are named and then linked back to the data (Patton, 1990). In this process, a continuous movement back and forth is needed. The Open Code software (ICT., 2009) enabled me to create and organize codes and themes.

In our analyses, we followed the phases described by Braun and Clarke (2006). In phase I, *familiarizing with data*, a research assistant transcribed verbatim the recorded interviews. When uncertainties emerged during transcriptions, I compared the transcripts with the original recordings. We also read and reread all data. In phase II, *generating initial codes*,

some 200 codes were constructed and analysed, based on their similarities and dissimilarities, and then categorized into sub-categories. Phase III, *searching for themes*, resulted in categories for various areas. Phases IV and V, *reviewing, defining, and naming themes*, resulted in main themes. In phase VI, *final analysis*, the analytic narrative was formulated. In order to deepen the understanding, illustrative examples were added.

### 6.2.1 VALIDITY ISSUES

Concerning the trustworthiness of findings in qualitative research, it is sometimes argued that the validity and reliability concepts have the same essential meaning as in quantitative research tradition (Long & Johnson, 2000). However, qualitative analysis theoreticians have developed concepts that are specifically linked to qualitative research (Guba & Lincoln, 1994). We applied the “credibility” and “dependability” concepts to describe various aspects of trustworthiness of our qualitative analyses (Graneheim & Lundman, 2004).

The credibility concept parallels that of internal validity used in quantitative research. It addresses the question of how *believable* the findings are (Bryman, 2016). In papers III and IV the two authors worked with the data until agreement was reached; quotations from the transcribed texts further illustrated the studies’ credibility. Dependability corresponds to external validity in quantitative research, and investigates if the findings are likely to apply at other times (Bryman, 2016). Here, the same interviewer interviewed all analysts and used the same guide for questions, albeit some questions specifically tapped the mother’s and the analyst’s experiences, respectively.

## 6.3 TRIANGULATION

Combining the quantitative and the qualitative studies of various aspects of MIP may be regarded as a way of investigation through triangulation (Denzin, 1970). This is a procedure that involves more than one method of collecting and assessing data (Bryman, 2016). The term has been used by Denzin as an approach that uses “multiple observers, theoretical perspectives, sources of data, and methodologies” (1970, p. 310). These principles suited my study, in which the aim was to get a richer and broader picture of what MIP is, how it is experienced, and which results it may yield.

I decided to pursue a triangulation methodology in order to:

- a. understand the quantitative results in light of qualitative findings
- b. deepen our understanding of the processes in therapy
- c. obtain information on how therapy could be developed
- d. obtain hypotheses for further research

A mixed-method approach like this has been successfully used to evaluate psychotherapies and support the implementation in clinical work (Midgley, Ansaldo, & Target, 2014; Leuzinger-Bohleber, Stuhr, Ruger, & Beutel, 2003).

## 7 ETHICAL CONSIDERATIONS

The infant study was approved by the Swedish Central Ethical Vetting Board (Centrala etikprövningsnämnden), Dnr Ö 16-2005. This project was approved by the Regional Ethical Review Board in Stockholm, Doc. no. 2009/1334-32. All mothers gave their written consent and were told that they could leave the study at any time. Video recordings were made only with their consent. All children received a LEGO toy for their participation.

An important ethical question was how to act in cases when I assessed that a child had essential problems. This happened on a few occasions. After the interview, I learnt that the mother had brought up such concerns with the interviewer. Thus, the mother was already aware of the problems and had consulted a child guidance clinic or a speech therapist. In cases when the mother was uncertain about the child's condition, she and the interviewer could discuss various ways of seeking help.

Another ethical question that needed to be approached was whether an interview with a child who had never met with me, and who could not fully understand its purpose, might be harmful. This objection cannot be discarded but one must also recall other factors that speak against it. One was my clinical experience as a child therapist, which had given me ample opportunities of sensing when a child might feel oppressed. Indeed, as I will argue in the results, some anxiety emerged in certain children. On the other hand, the interviews contained many parts that they thought were fun and interesting; the Wechsler test was generally approached as a positive challenge of "doing one's best". Many children also liked to invent stories in the SSAP test, drawing figures in the Machover test, and playing with the LEGO with mother. To sum up, I do not think I have caused any harm to these children. As for the mothers, some dropped out before the follow-up began but the majority chose to stay, which reflected their interest in the research.

## 8 RESULTS

### 8.1 LONG-TERM OUTCOMES ON CHILDREN AND MOTHERS (PAPERS I-II)

When the children were 3.5 and 4.5 years old, the mothers sent in questionnaires on their psychological well-being and the child's social-emotional functioning. At 4.5 years, the dyads were also examined through interviews. The children were assessed on attachment representations, socio-emotional development, psychological well-being, and global functioning (paper I). The mothers were assessed on psychological well-being and representations of the child, and the mother-child interactions permitted analyses of emotional availability (paper II).

Data were collected through interviews, questionnaires, tests, and independent interaction ratings. I interviewed the child, and the researcher responsible for the infant study interviewed the mother. A separate 20 minute video-recording for externally rated dyadic interaction was made with the interviewers absent.

#### 8.1.1 PAPER I

Paper I reported specifically on the results of the children. MIP was hypothesized to yield better effects on all measurements except cognitive functioning. The reasons for this assumption were the high frequency and duration, with 2-4 sessions per week for a lengthy period of time, and that the analyst applied a specific psychotherapeutic focus, not only on the mother but also on the baby.

The children's *cognitive functioning* was thought to be uninfluenced by the treatments. These assessments were included to check the possible impact of intelligence as a confounding factor on the outcomes. Since there were no between-group differences on the WPPSI-III scores, we could rule out this risk. In paper I the following table (3) showed the between-group comparisons at 4.5. years.



Table 3. Between-group comparisons at 4.5 years of age with statistical tests. From paper I.

Variable	MIP			CHCC			Comparison		
	N	Mean	SD	N	Mean	SD	Statistics	Value	<i>p</i>
ASQ:SE	32	.98	.90	32	.88	.68	t-test	0.480	.633
SDQ –M	32	8.17	5.54	31	7.39	5.19	t-test	0.580	.564
SDQ –T	24	5.71	4.32	27	6.59	5.31	t-test	-0.647	.520
CGAS	31	78.39	12.80	30	68.87	14.74	t-test	2.696	.009
CGAS cases/non-cases	8/23			16/14			$\chi^2$	4.841	.028
Machover formal	31	1.98	.58	29	1.85	.55	M-W	404.5	.431
Machover emotional	31	1.87	.68	29	1.79	.62	M-W	423.5	.671
SSAP Secure	31	2.22	1.05	30	2.32	1.33	t-test	-0.304	.762
SSAP Avoidant	31	1.05	.48	30	1.16	.52	t-test	-0.915	.364
SSAP Ambivalent	31	.96	.73	30	.84	.61	t-test	0.719	.475
SSAP Disorganized	31	.80	.84	30	.63	.58	t-test	0.883	.381
OK/Troubled Children	21/10			8/22			$\chi^2$	10.314	.001

Note. M-W = the Mann-Whitney U Test. SD = standard deviation.



The two instruments that showed between-group differences in favour of the children in MIP were the CGAS and the Ideal types. There was also, though this is not reported in the table, a tendency ( $p < .10$ ) among CHCC children to be more afflicted by somatic illness. Concerning *gender*, there were no differences between the treatment groups. In contrast, in the *entire sample* girls had more optimal scores on the WPPSI-III, the CGAS, the Machover Formal and Emotional, and the SSAP Secure. Interestingly, outcomes were not associated with number of MIP sessions.

For the SDQ, the reported cut-off is 11 (Malmberg, Rydell, & Smedje, 2003). Our mothers thus reported clearly better results than the cut-off points, and the teachers even more so. On the ASQ:SE, the cut off is reported to be 1.94 (Squires et al., 2001) for this age group. Also here, the mothers in our study reported much better results. On the other hand, the results on CGAS, rated by me and an external rater, were just above cut-off, which is reported to be 70 (Bird et al., 1990). To my knowledge, there exists no community mean scores for Swedish children in this age group. This also applies to the Machover scores, which were devised specifically for this study. Concerning the SSAP, I compared with a British community sample (Hillman & Hodges, 2011), where the mean score on the SSAP Secure for four to six year old children was 4.36. The SSAP measures on our children were clearly lower,  $m = 2.27$ . Furthermore, as much as half of the children were considered to be Troubled children (Ideal types). We may conclude that the mothers, and even more so the teachers, rated the children to function better than the external raters and I did.

### 8.1.2 PAPER II

This study compared long-term between-group differences on the mothers' psychological well-being and representations of the child as well as the mother-child interactions. MIP was hypothesized to yield better effects due to its intensive approach.

Concerning *major life events* between the infant and follow-up studies such as divorce, the birth of new siblings, unemployment, and psychiatric or somatic disorders and treatments of mother or child, no between-group differences were found. In the entire sample of 66 dyads, 19 reported marital discord or divorce, and 10 mothers had been on psychotropic drugs. There was a tendency for MIP mothers, compared with the CHCC mothers, to have conceived another child (20 versus 12) since the infant study ( $p = .099$ ). There were no between-group differences on the distribution of the WMCI categories. The reason was not that balanced and nonbalanced mothers had received therapies of different duration. Through logistic regressions, we investigated the associations between the WMCI representations, the treatment group, major life events, Ideal child types and child functioning (CGAS). No significant interactions were found and the absence of between-group effects on the WMCI thus seemed to reflect a true null hypothesis.

An overview of Means and Standard Deviations for the other measurements is presented in Table 4. For the EAS scores, only EAS Sensitivity is presented.

Table 4 Descriptive statistics of means and standard deviations of scores at all measurement points.

		<i>MIP</i>					<i>CHCC</i>			
Variable	Pre	Post	3.5	4.5		Pre	Post	3.5	4.5	
EAS Sens	.56(.14)	.64(.13)	-	.68(.12)		.60(.14)	.57(.17)	-	.57(.16)	
EPDS	12.29 (4.64)	6.28 (4.11)	6.56 (5.28)	5.47 (4.14)		11.44 (4.77)	7.99 (4.55)	7.35 (4.90)	7.03 (4.40)	
SPSQ	3.01 (.49)	2.67 (.48)	2.75 (.48)	2.68 (.58)		2.92 (.60)	2.74 (.54)	2.67 (.68)	2.60 (.55)	
GSI	.98 (.61)	.57 (.45)	.65 (.55)	.57 (.47)		.96 (.50)	.68 (.44)	.69 (.50)	.58 (.45)	

Pre = Pretreatment; Post = Posttreatment.

In paper II the results are presented as follows: "All measurements of maternal psychological well-being, that is, the EPDS, the SPSQ, and the SCL-90, were assessed at four assessment points; at intake, six months later, at 3.5 years and 4.5 years. Their development was assessed with an MLM procedure. In a first analysis the equations compared, step by step, scores at these four points. The only significant effects were found on the EPDS and the SPSQ pre- and post-treatment, as reported in the infant study (Salomonsson & Sandell, 2011a). In the next analysis, we sought to get an overall comparison of pre- vs. post-treatment levels. To increase statistical power, we had the MLM equations to take into account all post-treatment scores (directly after therapy and at child age 3.5 and 4.5 years), while controlling for pre-treatment scores". As illustrated in figure 4, presented in paper II, the initial EPDS effects in favour of MIP were maintained throughout the follow-up ( $t(70.8) = -2.368, p = .021$ , Cohen's  $d = 0.33$ ). The effect size was calculated as the standardized value of the estimate (-1.710) of the differential effect. The initial effects on SPSQ disappeared and there were still no effects on the SCL-90".

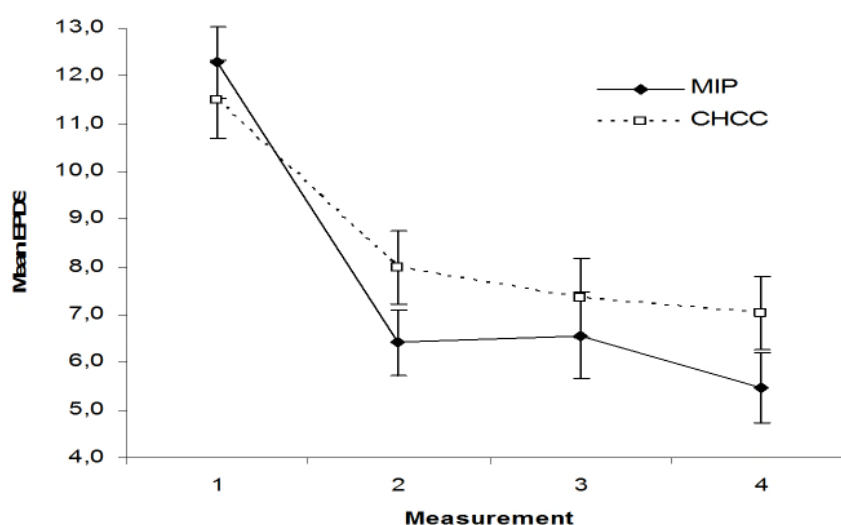


Figure 4. EPDS scores at intake, 6 months later, and at 3.5 and 4.5 years. The error bars depict 95 % confidence interval. From paper II.

We explored if any of the variables from the infant study, where between-group effect were found, the EPDS, the SPSQ, the EAS, and the Parent-Infant Global Assessment Scale; (PIR-GAS; ZERO-TO-THREE, 2005), mediated outcomes on the CGAS and the Child types. The total mediated effect of treatment via the EPDS, SPSQ, EAS Sensitivity, and PIR-GAS was significant for the CGAS ( $p = .027$ ) and marginally significant for the OK Type ( $p = .076$ ). However, none of the specific mediated effects reached significance. Thus, if MIP had effects on the infants that were not detected until the child reached 4.5 years, this cannot be explained by one single factor in the mother or in the dyadic relationship.

One third of the CHCC mothers received additional brief treatments. We compared the three groups, MIP, CHCC with additional treatment, and CHCC without such treatment through an MLM analysis. A difference in favour of MIP, compared with CHCC with additional treatment, on the EPDS was the only difference found. The MIP mothers' mean score was 2.37 points better than this subgroup of CHCC mothers ( $t(73.0) = 2.338, p = .022$ ) at 4.5 years.

No between-group differences were found on any of the EAS dimensions, except for an advantage for the MIP treatment on sensitivity at the second measurement point during infancy ( $p = .032$ ), as reported in the infant study. Thus, the effect on sensitivity, to the advantage of MIP, disappeared at 4.5 years. This finding will be put in a broader context in section 9.2.2.

I will now compare our results with normal populations. Concerning EAS Sensitivity, if we transform the normal values reported by Biringen et al. (Biringen, Skillern, Mone, & Pianta, 2005) according to the procedure used in our studies, that is, by dividing the raw score with the maximum score, their value was .65. This indicates that our levels were equal to theirs and at nonclinical levels. Regarding the EPDS, we compare with an Australian normal sample with a mean score of 5.38 4 years postpartum (Giallo et al., 2015). Thus, the scores were in the normal range in both groups, with an advantage to the MIP mothers of 1.6. The mean SPSQ for Swedish women is 2.52 (Östberg et al., 1997) and our means were close to this value at 4.5 years. Concerning the GSI, normative values are .45 for 25-40 year-old Swedish women (Fridell et al., 2002) and .51 for Swedish mothers 18 months postpartum (Börjesson, Ruppert, & Bågedahl-Strindlund, 2005). These figures also correspond to ours. Thus, in the entire sample the mothers mostly reached normal scores.

Concerning the WMCI, among the mothers in the whole sample, 62% had balanced representations. Community measures are reported to vary between 53 and 57% (Borghini et al., 2006; Coolbear & Benoit, 1999; Vreeswijk et al., 2012). Thus, in comparison our figures were slightly more optimal. All in all, mothers in both treatments groups showed attachment representations at a nonclinical level.

## **8.2 QUALITATIVE INTERVIEWS WITH MOTHERS AND ANALYSTS (PAPERS III-IV)**

The results of the first two studies (papers I-II) led to my interest in studying the mothers' and the analysts' experiences of MIP. The rationale was that since mothers and children seemed to benefit from it in various ways, it would be relevant to examine how the participants experienced the treatment. I utilised posttreatment interviews from 10 randomly chosen mother-infant dyads data among the 33 MIP dyads who continued to participate during the entire project period. The transcribed interviews with these mothers and their analysts were then analysed in detail (Bryman, 2016).

Paper III investigated the interviews with the mothers, paper IV those with the analysts. Both studies used thematic analysis (TA) (Braun & Clarke, 2006; Braun & Clark, 2012).

### 8.2.1 PAPER III

Five mothers were very positive and four mostly positive toward the MIP treatment. One mother was critical. The analyses yielded two main themes: (i) transition to motherhood and (ii) relationships with the infant and family. Before commencing treatment, the women often felt helpless and bad as mothers. From a psychiatric point of view, they constituted a rather care-intensive group with previous emotional problems such as bulimia or anorexia and psychiatric disorder in childhood and adolescence (Salomonsson & Sandell, 2011a). The analyst was perceived as someone willing to listen and comment on mothers' situations. Sharing thoughts, feelings, and problems was valuable but also painful, i.e., when one had to face one's self and past and present life situations: "I didn't accept any help, either ... it was pretty lonely, I wouldn't let others in, it was just me and the boy. To attend sessions with A [analyst] helped me understand how I isolated myself. And that was pretty tough to see". There were also doubts about if MIP really helped: "I don't know ... it's been good but ... I don't know if it's therapy only that has made the situation better".

At the start, many mothers did not understand why the psychoanalyst turned to the child. But if the mother eventually understood the arguments for this approach, she could benefit from it and develop her relationship with the baby. Thus she could grow into her role as a mother. Some mothers reported that they had been too close to the child. MIP helped them look at the child "from the outside". Others initially felt estranged and remote from the child. Whether a mother was too close and overly involved with the child or, in contrast, too distant and restrained, it was difficult for her to (i) get to know the child, (ii) understand who the child really is, and (iii) empathize with the child.

In relation to the two main themes, four and three subthemes emerged, as summarized in Figure 5.

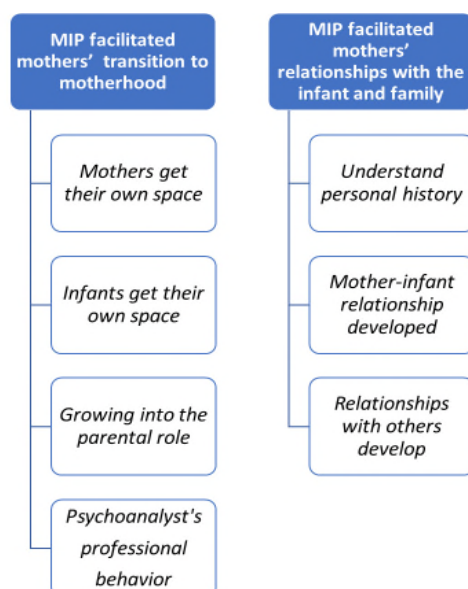


Figure 5. Transition to motherhood and relationships with the infant and family. From paper III.

Many mothers reported that they arrived at a better understanding of the child during therapy and that their relationship developed. One mother said: “I didn’t think an infant could be such an independent person, that you could communicate so seriously”. They also thought MIP helped them clarify how their personal history could be linked to the experience of having become a mother. The relationship to the child’s father was also subject to analysis. In some cases, the mothers claimed that they had got a more realistic view of their partners. The mothers often expressed that they liked and trusted the analyst, whom they perceived to be compassionate and warm: “She [the analyst] was soft and listening. She was a little bit like, well not a mother, but something similar. Not a mother-figure but a bit like a mother could be”. These mothers meant that the analyst could balance the needs of mother and child. In cases when mothers were critical, they claimed that they did not get enough time to talk about their personal problems: “It was not quite as I had imagined ... there was so much focus on the boy. I suppose I felt a need to talk about my feelings. I’m the one with the problems”.

### 8.2.2 PAPER IV

This study analysed the analysts’ experiences. They reported that they felt *satisfied* with the MIP therapies in five of the study’s 10 cases and *rather satisfied* in four cases. In one case, the analyst was dissatisfied and was critical of her own work. Their assessments were consistent pair-wise with the mothers’ experiences of MIP (paper III).

In the analysis two main themes emerged, “Mother and infant together in MIP” and “Cooperation in MIP” with three and four subthemes, respectively. Figure 6 shows the main themes and the subthemes.

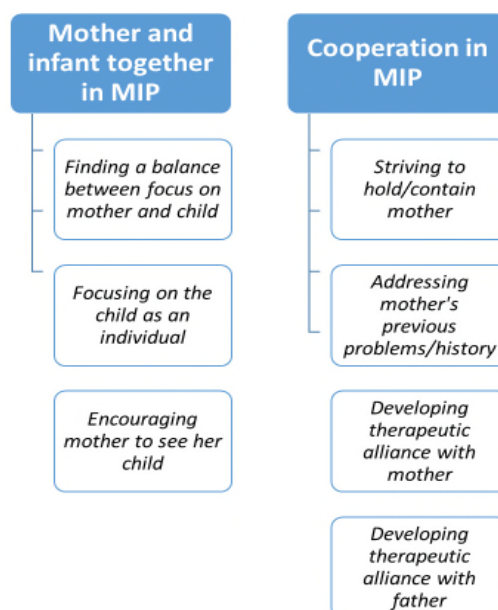


Figure 6. Mother and infant together in MIP and Cooperation in MIP. From paper IV.

The analysts addressed both participants. In most cases they felt comfortable with this procedure. However, sometimes they perceived that the mother competed for space with the child. In these situations, the analyst felt it was not easy to focus on the child: “It was like having two screaming kids in the room. It was as if I must give something all the time to the little one **and** to the mother”. The analysts described how the mother sometimes tended to see her child as a narcissistic extension of herself. In other cases, they noted a tendency in the mother to project her own fears onto the child. In both these situations, the analysts reported that they needed to help the mothers see their children as individuals in their own right.

An important therapeutic aim was to help the mother develop a more optimal *bonding* with the child: “She thought she could not bond with her child; she felt empty. It became apparent that she felt very rejected by her little 6-month-old baby. That’s how she interpreted it”. Some analysts described their strivings to develop the relationship between mother and infant in a more warm and genuine way in terms of strengthening the child’s *attachment* to the mother: “It has been hard work to facilitate the attachment, working with the boy’s separation anxiety that was aggravated by the mother’s separation problems. Toward the end, the mother said: ‘Now he relates to me in a different way’”.

Many analysts indicated that they focused on the mother’s depression and sense of guilt, which sometimes linked to the new situation of having become a parent. At other times these feelings were deeply rooted in the past and now the problems surfaced with renewed force: “We worked with these monster images in her head, images not only of her child but also of herself as a monster. She was extremely frightened that she might repeat her own childhood history [when she remembered feeling nasty and rejected].”

When describing their cooperation with the mother in MIP, the analysts talked about *holding* as well as *containing* her. The analyst noticed that when s/he succeeded in containing the mother’s worries, her anxiety could diminish. This had the effect of positively affecting the mother’s *therapeutic alliance* with the analyst. The analyst felt s/he could reach the mother: “There was ambivalence, yet she was genuinely grateful when she ended treatment. A certain warmth developed between us. I believe the sessions meant a lot to her.” However, in some situations the alliance was not optimal and this state of affairs was difficult to rectify: “I’ve had to be careful with the mother; she was very easily offended. She had to have super-control of me and of her child”. Sometimes, this led the mother to want to end treatment prematurely and find another analyst: “She was disappointed that the child took up so much space. Her own needs were so vast. She didn’t express her needs, and I didn’t capture them. Yes, there was a reconciliation. But the mother was still disappointed. She decided that she wanted to go back to her previous therapist”. Interestingly, in these cases, mother and analyst seemed to agree that they did not “tick”.

In some interviews, MIP work also included the relationship to the father. In fact, in five of the ten cases the partner briefly took part in sessions. This finding was surprising, since Norman, the inventor of MIP, clearly focused on the mothers and their babies. In therapies in which the father took part, the analysts often found that a therapeutic alliance with him developed as well. This contributed to a positive development of the entire family.



## **9 GENERAL DISCUSSION**

### **9.1 SUMMARY: ANSWERS TO RESEARCH QUESTIONS**

The research questions were formulated in the aims of the study:

(A) To compare the long-term efficacy of MIP and CHCC on:

- (1) outcomes of child functioning on cognitive, social and emotional domains, attachment representations, and psychological well-being (paper I)
- (2) outcomes on maternal distress and representations of the child (paper II)
- (3) outcomes of mother-child interaction (paper II)

(B) To investigate the mothers' (paper III) and the analysts' experiences (paper IV) of MIP and what they found rewarding and challenging in that work.

The quantitative assessments of the children showed differences in favour of MIP on the CGAS and the Ideal types. The other variables showed no effects. Only now did the EAS Sensitivity, which had improved for the MIP mothers already in the infant study, reach similar levels among the CHC mothers as well. The MIP mothers had lower measurements on EPDS at all the follow-ups. Other variables on maternal well-being and mother-child interactions yielded no between-group effects.

In the qualitative analyses of interviews with MIP mothers, they reported how they developed an identity as a mother and were able to see the child as a separate person. Most mothers appreciated that the analyst addressed both child and mother. However, some experienced that too little focus was applied to their personal problems, such as anxiety and sadness. In the interviews with the analysts, they reported on their efforts at finding a balance between focus on the mother and the child. The analysts described their, often but not always, successful strivings to be emotionally available for the mother and how a therapeutic alliance developed with mothers and fathers.

### **9.2 DISCUSSION OF QUANTITATIVE MEASUREMENTS AND RESULTS**

Over the years, many parent-infant psychotherapies have been developed. They proceed from the mother's predicament, the mother-child relationship, or with the situation in the family. Some modes actively include the infant in treatment. This would give ample opportunities of studying the efficacy of different therapeutic modes of helping mothers and infants in distress. Yet, surprisingly few studies have been implemented, especially on long-term effects. To my knowledge, the only one is a British study that compared outcomes of various psychotherapeutic interventions with depressed mothers and their infants (Murray et al., 2003; Cooper et al., 2003). Participants were randomized to cognitive-behavioural therapy, psychodynamic mother-infant therapy, nondirective counseling, or routine primary care. At follow-ups at a child age of nine months, 1½ years and 5 years, outcome measures showed no long-time benefits for the active treatments. I will now compare these findings with the present study. Our results showed that the MIP treatment seemed to have helped children, on some measures, to a better functioning and well-being around 3.5 years after treatment. In addition, the MIP mothers seemed to have been less depressed during the children's infancy and toddlerhood.

How come that effects of a specific therapy were found in our study but not in the British study? The British study recruited mothers who scored high on depression scales, whereas our study recruited those who actively looked for help with their baby worries, either through their CHC nurse or parental sites on the Internet. Secondly, MIP treatments lasted longer and with a higher frequency and ended only when the mothers and the analyst agreed to do so, whereas all the British index mothers received ten once-weekly sessions (Cooper et al., 2003). Thirdly, the MIP-analyst addressed not only the mother but also the infant about his/her distress to promote attachment to mother. This was not explicitly done in the British study which, from a theoretical standpoint, may have been a disadvantage. Finally, both studies used mother- and teacher-rated questionnaires and a cognitive test on the children, but I also assessed them via interviews. This approach enabled me to get into contact with the individual child and follow up with questions adapted to him/her specifically. Also, every child aroused various feelings in me (countertransference), emotional information that formed part of my assessments. Thus, subtle processes that perhaps could not be detected by a questionnaire could emerge in our direct contact. All in all, I deem the interviews to have contributed to forming a more comprehensive assessment of the child, a conclusion shared with Lynne Murray (personal communication, June 16, 2014). I will now investigate how these factors might have contributed to the between-group differences.

### **9.2.1 PAPER I**

The two child measurements that showed effects, the CGAS and the Ideal types, shared some similarities; both were efforts at quantifying implicit phenomena, they were collected under stress, information was obtained from different sources, and they were assessed by experts. Moreover, they involved information from my personal meeting with the child. Thus, they could be said to be the most comprehensive assessments. The CGAS measurements were made in collaboration with an expert rater, while I made the Ideal type assessments and performed a reliability check with an external rater. One conclusion might be that these results point to the long-term efficacy of MIP treatment. However, we must also take into consideration the measures that showed no between-group differences. Do the latter negate the efficacy of the MIP, or do we need to look closer into the validity of the instruments? These questions will now be discussed.

Concerning the results on the questionnaires where mother assessed the children, one might suspect that they reflected a maternal bias. A separate study (Salomonsson & Sleed, 2010) on the mother's ASQ:SE reports in the infant study indicated that they reflected more closely the degree of their own psychological well-being than their children's functioning as assessed by external raters. While this shadow of a doubt might be applied to the validity of the mothers' ratings, it is not applicable to the preschool teachers' SDQ reports. After all, they were less emotionally involved with the children and one would not expect their affective state to influence ratings. They reported no between-group differences. If we look at the score levels of these two questionnaires, we note that mothers and teachers rated the children quite low. This could lead to a floor effect. Simply put, their assessments were so low that they could hardly be improved. Another possibility was that I overstated the children's problems. A third alternative was that I discerned other aspects of their functioning when I met with them in the stressful situation of an interview. This assumption pertains to a more general question, namely, if there might be overarching differences between collecting data during a personal meeting versus collecting them from questionnaires. I will discuss this issue further down. The fourth and final alternative is, of course, that the absence of between-group effects on the children, already demonstrated in the infant study, continued up to 4.5 years. This would support one alternative already suggested in the infant study; according to mothers and later also teachers, MIP did not affect the functioning of infants and children to the extent that we

had hypothesized. We will rest our case for the time being, to arrive at a final conclusion further on.

I will now look at those quantitative assessments of the children that were based on data collected during the interview. As for the Machover test, it is known that scoring methods are not well established. Assessments of drawings and answers to the questions are difficult to validate on young children (Blomberg & Cleve, 1997). In a psychotherapeutic setting, a child's drawings and reflections on them might give valuable insight into his/her internal world. In contrast, they seem less valid in a research study that aims to appoint scores to the child's cognitive and emotional functioning. Yet, the test was valuable in another way; the children's drawings and comments inspired my categories when I created the Ideal types.

The SSAP instrument was used to measure the children's attachment representations. Our sample rated lower on the security variable compared with a normal child population (Hillman & Hodges, 2011). We found no between-group differences, which surprised us since MIP treatments aimed at affecting the baby's attachment to the mother and any long-term effects would be most clearly visible on this domain, or so we hypothesized. Other studies have demonstrated associations between SSAP scores and maternal psychopathology (Pass, Arteche, Cooper, Creswell, & Murray, 2012), children's attention and achievements at school (Jacobsen, Edelstein, & Hofmann, 1994), preschoolers' verbal IQ (Stievenart, Roskam, Meunier, & van de Moortele, 2011) and changes in symptoms/strengths (Stadelmann, Perren, von Wyl, & von Klitzing, 2007). On the other hand, some authors dispute any direct connection between attachment categories and child psychopathology (Minnis, Green, O'Connor, Liew, Glaser, Taylor, et al., 2009; Sroufe, Egeland, Carlson, & Collins, 2005). To sum up, the question whether the SSAP can function as a psychotherapy outcome measure still has no definitive answer.

Another possibility remains; that the MIP treatments actually did not affect attachment. To get more material to form an opinion, I will first discuss another instrument, the Ideal types. The reason is that perhaps, this instrument also tapped attachment security - though in another, more intuitive and less systematic way. I was sensitive to the child's calm or unease when s/he was with me, and my impressions from this area yielded various types. Thus, they indicated something else than the SSAP. The latter quantifies four dimensions of attachment representations. Each dimension is well-defined but also rather narrow. In contrast, the Ideal types are more global and nebulous and reflect a clinician's judgement of the child's emotional balance and abilities.

Why were then treatment effects detected by the types but not by the SSAP? One conjecture is that in creating the types, I made use of my reactions to emotionally transmitted information of the child's inner state and relational patterns (countertransference), whereas this was not feasible for the SSAP rater who scored transcripts from videos of a child in a more structured situation. Another assumption is that my assessments of Ideal types, since they were based on information from several sources, provided a more comprehensive picture of the child than did the SSAP. Further down, I will discuss a third factor, namely, if the children's behaviours were coloured by their mothers' expectations of meeting with me. To briefly anticipate this factor, we assume that the MIP mothers' expectations were more positive than those of the CHCC mothers, differences that might have influenced the children in their relationship with me.

Another entry is to discuss our data as being *implicit* or *explicit*. For a description of the terms, see 6.1.1. The questionnaires (and, of course, the WPPSI-III) offered explicit data in that they tapped the respondent's conscious experiences and judgements. In contrast, the

remaining four instruments aimed to quantify implicit phenomena. In this quartet, the SSAP and the Machover were focalized and measured only the child's responses to story stems and drawings, respectively. The assessments of the CGAS and the Ideal types were retrieved from several sources. The CGAS relied on my interview impressions, transcripts of the other researcher's interviews with the mothers, and scores on the SDQ and the ASQ:SE. The Ideal types relied on the child's behaviour - though not the scores, which were calculated post hoc - during the interview when he was submitted to the WPPSI-III, the Machover, the CGAS, and the SSAP. I therefore argue that the CGAS and the Ideal types are more comprehensive and provide a more all-round picture of the child's functioning and character. Having stated this, one might ask: Is this a tenable explanation as to why we found between-group effects only on these measures? At this point, this would seem a bold and unfounded conclusion.

We must therefore investigate further the differences between various instruments. We note one least common denominator for the implicit measures; data were collected under stress, whereas the "explicit" were amassed in everyday life by mothers and teachers. In the interview situation, the child was exposed to various challenges. I could thus get a picture of his/her stress tolerance and how s/he functioned with a stranger. In my assumption, this enabled me to discern difficulties that the parents and the teachers did not detect, which were then reflected in the CGAS and the Ideal types. This would, to be true, also influence the child during the SSAP procedure but might, as suggested above, be more difficult for an external rater to discern from transcripts of video-recordings. After all, there is a difference between assessing a child through a personal, lengthy and multifarious meeting or through a transcript of his/her responses in a brief, structured situation.

The claim thus seems valid that the CGAS and the Ideal types yielded between-group effects, not *though* but *because* they were implicit measures. This must be countered by yet another argument; my allegiance as a psychoanalyst has to be considered (Luborsky et al., 1999; Markin & Kivlighan, 2007; Munder et al., 2013). Yet, I was unaware of the children's history and assignment, so its influence cannot have been overwhelming. Moreover, the CGAS assessments were made in collaboration with a non-analyst rater and for the Ideal types, the coder for reliability was also a non-analyst.

Still, there might be another possibility that pushed the scales in favour of MIP on the CGAS and the Ideal types. As already pointed out, both assessments involved my presence more than the other instruments. It is plausible that the MIP mothers had more positive expectations when bringing their child to the interview. We base this conclusion on the infant study's finding that two of the questionnaires, the EPDS and the SPSQ, indicated that they felt they had received help in MIP treatment. This attitude could have rubbed off to the children and make them more positive and relaxed with me. Here we have a possible influence of "demand characteristics" (Orne, 1962, 1969). Such a situation arises when "the totality of cues which convey an experimental hypothesis to the subject become significant determinants of subjects' behaviour" (p. 779). All mothers had met with the first interviewer, BS, pre- and post-treatment. The mothers knew that he and I are psychoanalysts and married. We assume that if the MIP mothers felt they had been helped by the treatment, this could result in a friendly attitude, which affected the children positively. In this interpretation, the between-group difference was not primarily, or at least not only, an effect of the MIP treatment. If such a factor had an impact, it would be most apt to become visible on the ratings that relied most heavily on my presence. One could argue that demand characteristics would then also affect the results on the mothers. However, we never assessed them with methods that collected data in ways similar to the CGAS and the Ideal types.

## 9.2.2 PAPER II

The hypotheses that the MIP mothers would demonstrate more favourable results were confirmed only on the depression measure. EPDS showed no differences at single measurement points except after 6 months - corresponding to the effects reported in the infant study - but MIP mothers were comparatively less depressed during the *entire* period. Post-treatment, their scores decreased and remained there up to 4.5 years. To compare with the British study, Cooper et al. (2003) reported significant effects for the index treatments on the EPDS directly after treatment, but from a child age of 9 months to 5 years, they found no such effects. One possible explanation is that the Swedish MIP mothers received more therapy sessions, and at a higher frequency, than the British mothers. I think that the MIP mothers were helped by this so as to better support their children throughout infancy and toddlerhood.

I will now discuss why there were no between-group effects on the WMCI. This measurement was introduced at 4.5 years. Our study reported 62% balanced mothers. In comparison, community values of 53-57% have been reported (Borghini, Pierrehumbert, Miljkovitch, Muller-Nix, Forcada-Guex, & Ansermet, 2006; Coolbear & Benoit, 1999; Vreeswijk et al., 2012). Here a ceiling effect might explain our result. Any between-group effects, whether confirming or rejecting our hypothesis, would therefore have little opportunities of emerging.

The measurement on mother-child interaction, the EAS, was used at three time points and with the same raters. Effects were found on sensitivity 6 months after therapies started but not at 4.5 years. The sensitivity scores were now 0.676 and 0.671 in the two groups. This level corresponds to normal values reported by Biringen et al. (Biringen, Damon, Grigg, Mone, Pipp-Siegel, Skillern et al. 2005). This result can also be explained as a ceiling effect. Importantly, the fact that MIP mothers reached normal levels of sensitivity already during their children's infancy is a finding that will be highlighted in the clinical conclusions section below.

## 9.3 DISCUSSION OF QUALITATIVE ASSESSMENTS AND RESULTS

The quantitative results, indicating some effects in favour of MIP, raised questions about this treatment mode. How did the mothers experience MIP? What did they find helpful and which were the hindrances? Some studies on the clinical work in MIP have been reported by Norman (2001, 2004) and Salomonsson (Salomonsson, 2013, 2014, 2015). They were case studies where the authors were involved as analysts, thus illustrating how they applied and conceptualized their work. I saw a unique opportunity opening up in the interview transcripts from the infant study; to study several cases reported by a researcher who did not conduct the therapies. I decided to qualitatively analyse some of these interviews. This procedure could shed light on how mothers and analysts experienced their roles in treatment, how the infant contributed and how the analysts were working. For every therapy, there were transcripts of interviews with mother and analyst, which enabled me to compare their narratives.

### 9.3.1 PAPERS III AND IV

In the qualitative analyses in paper III, the "transition to motherhood" was one of the two main themes. The concept of transition has been emphasized in the nursing literature (Schumacher & Meleis, 1994), underlining changes in identities, roles, and relations. Our descriptions of a mother's passage to motherhood and to develop a relationship with her child

were in line with other authors. For example, Stern (1995) presented four themes along which a mother develops in order to receive her child. The *life-growth theme* is about the mother's capacity to maintain the life and growth of her baby, while the *primary relatedness theme* deals with her engagement in the baby to assure the baby's emotional development. The *supporting matrix theme* comprises the necessary support systems, preferably the partner, and the *identity reorganization theme* is about the transformation of her self-identity. Our theme transition to motherhood seems to coincide with Stern's life-growth and identity reorganization themes while our second theme, "relationships with the infant and family" is similar to Stern's primary relatedness and the supporting matrix themes.

One subtheme to the theme "transition to motherhood" was "understand personal history". Mothers and analysts reported that the mother's earlier relationships, especially with her own mother, was often talked about in sessions. Sometimes, MIP helped mothers perceive their own mothers in a new way; in a few cases, they described how they could even break destructive transgenerational patterns. Furthermore, when these patterns were clarified and worked through, the relationship with the child could develop in a new and more optimal way. This finding is important for mother and child, since Fonagy et al. (Fonagy, Steele, Steele, Moran, & Higgitt, 1991) have shown that a mother's capacity to reflect on her own childhood predicts the child's attachment mode at twelve months.

The analysts thought that in most cases it worked well to obtain a dialogue with both mother and child, while at the same time taking into account the mother's feelings of insufficiency and anxiety. The analysts also turned to the child in direct communication. Some analysts suggested that in these situations, the children manifested *transference* towards the clinician. Such manifestations contained positive elements, such as the baby's interest or joy when looking at the analyst. There were also negative elements, which was interpreted as fear of and anger with the analyst. The analysts verbalized these ideas to the baby. This is in line with findings by Salomonsson (2013) stressing that "the more we observe a direct negative infant transference, the more we need to address the baby" (p. 788).

Each analyst-mother pair seemed to assess their satisfaction/dissatisfaction with treatment in a parallel way. They reported mutually similar feelings towards each other and also how they estimated the results of therapy. Most MIP mothers were content with their treatment. Still, they often expressed that at first, they did not understand why the analyst focused on the child. After some time, the mother could observe how analyst and child interacted and she became able to see her infant as a person in his/her own right. This paved the way for a deepening contact. This development is in agreement with Norman's suggestion that "the interaction between the infant and the analyst may be able to activate and retrieve those parts of the infant's inner world that have been excluded from containment and ... can then become worked through in the mother-infant relationship." (2001 p. 83). In the interviews with the mother it was evident, however, that for this development to take place, the analysts needed to actively address the mother and help her contain the child. Obviously, this did not occur in all the ten treatments.

In some cases, the mother expressed her dissatisfaction with the child focus and would have preferred more focus on herself and her own problems. Here is a risk that the mothers experienced the analyst as distanced and that she did not benefit enough from therapy (Werbart, von Below, Brun, & Gunnarsdottir, 2014). One possible explanation to these instances is that she felt lonely and isolated and had difficulties to open up to another person. Alternatively, her personal problems were so great that treatment should have focused primarily on her. Even if the mother's own well-being was not the primary focus in MIP, these mothers may have needed much more personal attention. Here the analysts may have

been too prone adhering to the technique to discern clearly enough the mother's needs. Actually, in the analyst interviews with cases where the mother complained about the baby focus, the analyst had noticed this problem.

The theme how mothers and analysts experienced their cooperation is relevant, and not only for our understanding of their subjective feelings. Even more important for our evaluation of the MIP method is that, as many studies have emphasized, the alliance between patient and therapist is essential for treatment outcome (Blatt, Sanislow III, Zuroff, & Pilkonis, 1996; Falkenström, Granström, & Holmqvist, 2013; Lilliengren, Falkenström, Sandell, Risholm Mothander, & Werbart, 2015; Lilliengren, Werbart, Risholm Mothander, Ekström, Sjögren, & Ögren, 2014; Martin, Garske, & Davis, 2000). Mostly, this alliance has been examined from the patient's point of view (Orlinsky, Rønnestad, & Willutzki, 2004). The interviews indicated that in the MIP treatments, establishing a therapeutic alliance from the start was not a primary focus. It rather evolved gradually. The analysts emphasized how a therapeutic alliance developed with mother and sometimes also with father. The mothers used another terminology for their cooperation with the analysts. They reported that they at first felt helpless and bad as mothers. The analysts were often seen as warm and listening, and many mothers expressed great confidence in them. Others expressed a need for more room and attention in treatment. In my interpretation, this indicates that when a mother's needs are substantial, a modified technique should be used to ensure that she gets more space to express herself. This requires that the analyst is receptive to her needs. Many mothers had personal problems long before they became pregnant and the new situation with a newborn increased her depression and anxiety. Consequently, the MIP analyst needs to pay attention to the mother's personal requirements as well as the child's needs. In my view, this should be considered when the treatment method is developed in the future.

## 9.4 THE ROLE OF THE FATHER

The transition to parenthood is a great challenge for both parents. The role of the father has been acknowledged increasingly during the last decades. Nowadays, they have become more involved in child care (Genesoni & Tallandini, 2009). In their transition to fatherhood (Draper, 2003) they may experience problems in adapting to their new role (Fägerskiöld, 2008; Luoma, Puura, Mäntymaa, Latva, Salmelin, & Tamminen, 2013). It is important to pay attention to the father's role during pregnancy, childbirth and infancy both in our clinic (Poh, Koh, & He, 2014) and in community health care (Skjothaug, Smith, Wentzel-Larsen, & Moe, 2015). Having become parents also affects the couple relationship (Cowan & Cowan, 2000). The transition from being two to three persons in the family places new demands on both partners. These changes may affect the couple's relationship, not seldom with a decline in marital satisfaction (Belsky, Lang, & Rovine, 1985). We may note that in this sample, most parents were first-time parents, which perhaps reflects a preponderance of baby worries among many first-time parents.

In my research, the overall aim was to examine MIP, a method that focuses primarily on the mother-infant relationship. The clinical practice and the publications by MIP analysts indicate that the father's participation is accepted but that it is also considered to entail a risk of obscuring the focus on the analyst-infant and the mother-infant relationships. Norman (2001) wanted to reach the one he considered to be the baby's primary caregiver; the mother. It was towards her that the infant directed the projections and when the analyst contained them, the mother was relieved and the baby's repressed affects could surface. Therefore, the father held a secondary place in treatment. This had nothing to do with any dismissive view of his role in the family. In fact, MIP therapies focusing on the father-infant relationship have been published (Hellberg, 2011; Salomonsson, 2013).

Regarding questions of design, we need to emphasize that the infant study did not include fathers in assessments or interviews. In planning the follow-up study, I might have invited them to fill in questionnaires and take part in interviews. However, since they had not been part of the infant study, I concluded that from an ethical point of view, this would be dubious. Furthermore, we would then only acquire a one-point measurement whose validity would be uncertain.

Nevertheless, I got some information on the father's role in the interviews. The results of studies III and IV indicated that in half of the 10 cases, the father had participated in one or more MIP sessions. The analysts reported on how they established a therapeutic alliance with him as well and how he took an active part in the session. According to the analysts, the mothers sometimes had difficulties to let him take part in the care of the infant. At other times, the clinical problem was that he distanced himself from mother and child. Many analysts expressed that father's attendance in MIP could help them develop as a *family*. Thus, this reflected a shift in focus from Norman's approach. In other cases, mothers expressed a need of a personal space, without the father being present, where they could process past experiences and the new role as a mother.



## 10 CLINICAL CONCLUSIONS

I conclude that mothers and infants with baby worries were helped, on a short- and a long-term basis, with a relatively short, intense psychoanalytic treatment. I base this assertion on four findings.

Children:

- Children in the MIP group had a better *global functioning* (CGAS) at 4.5 years of age.
- Their *psychological well-being* (Ideal types) was also more optimal.

Mothers:

- The MIP-mothers' *sensitivity* to the child (EAS Sensitivity) improved directly after treatment and remained at these levels at 4.5 years. In contrast, the CHCC mothers reached similar levels only at 4.5 years.
- The MIP mothers' initial *depression scores* (EPDS) improved after treatment and continued to be lower than the CHCC mothers during the entire follow-up.

The time factor was thus beneficial for the children; MIP helped mothers to relieve their depression and become more sensitive already at a time when the babies were vulnerable and in need of immediate help. This might be an important factor in explaining why early intervention seemed to improve long-term development of the children on some measures.

Concerning the methodology of parent-infant psychotherapy, the results yielded the following suggestions:

- A modified technique of MIP should be used by the analyst when the mother needs personal help.
- The mother could be helped by information about how MIP is supposed to work as a treatment mode. This will give her a possibility to understand and be comfortable with its infant focus.
- Fathers could take part in therapy to a greater extent (Brockington, 2004). His participation in sessions may help the family function better. However, some mothers need therapeutic help with their personal problems in the transition to motherhood. Sometimes, the child seemed to be in such distress that the analyst needs to address him/her directly. In these cases the analyst should approach the individual baby or mother before s/he helps the triad.
- It is essential to intervene promptly when problems emerge. This may help the dyad recover faster, which in turn may give long-term effects on the children.

As for the question of organizing primary health care for these families, we need to ask: How do we reach mothers and infants most in need of help? In Sweden, a natural and simple way of offering psychological help to distressed families would be at the CHC. This would be in line with how child health care is organized in Finland and Norway (Socialstyrelsen, 2012). To this end, knowledge and experiences by the MIP analysts were implemented in a project where they were placed at CHCs in Stockholm. The underlying aim was to integrate medical and psychological primary health care. To this end, they offered brief consultations to families and supervised the nurses. This project is being evaluated systematically and will be presented in an upcoming study.

# 11 STRENGTHS, LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

The RCT paradigm is a well-established research mode and can be regarded as a strength in this study. Of course, the external validity is always subject to speculation, since an RCT sample is always limited. Our sample size corresponded to other outcome studies on mother-infant psychotherapy (Cohen et al., 2002; Letourneau et al., 2011; Fonagy et al., 2016; Robert-Tissot et al., 1996), but it would be commendable to make therapy studies on a grander scale in the future. In the qualitative studies, I was in the position to investigate in depth how mothers and analysts experienced the treatments. This gave me an opportunity to make suggestions how the MIP treatment can be further developed. Inevitably, they were based on a sub-sample of cases, which makes generalizability uncertain.

The mother's demand characteristics (Orne, 1962, 1969) also need to be considered. This topic was discussed under 9.2.1. Another kindred factor is the researcher's allegiance (Luborsky, Diguer, Seligman, Rosenthal, Krause, Johnson et al., 1999; Markin & Kivlighan, 2007; Miller, Wampold, & Varhely, 2008; Munder, Brüttsch, Leonhart, Gerger, Barth, & Guedeney A., 2013), which must also be taken into account. Both I and the interviewer of the mothers are psychoanalysts and our allegiance is therefore towards such methods. To diminish this factor's possible impact, we did not participate in the analytic work or theoretical discussions concerning MIP. Furthermore, I was unaware of the treatment assignments and the participants' background and problems. In contrast, the mothers' interviewer had met them in the infant study and knew about histories and assignments. Despite his efforts at maintaining a neutral attitude, it is possible that his allegiance was discernible to the mothers and perhaps spread to the children. This would exemplify how allegiance and demand characteristics (Orne, 1962, 1969) may interact. Such bias could have been minimized had we used external and unbiased raters. On the other hand, this would probably have increased the dropout rates, which were low. Also, the contact established between, first BS and the mothers, and secondly between myself and the children, enabled in-depth dialogues with the respondents. This was decisive for obtaining high-quality interviews in both studies. The yield was a deeper understanding of the mothers' and the analysts' experiences of MIP (paper III and IV) and of the children's functioning as well as personality characteristics and psychological well-being (paper I).

The fathers were not recruited to the infant study. They were not interviewed and their points of view could not be studied. In fact, the qualitative study showed that in half of the 10 cases, fathers took part in one or several therapy sessions. Still, the study design did not include any systematic evaluation of their experiences, psychological well-being, or interactions with their children and partners. Due to present-day fathers' increasing participation during pregnancy, childbirth and infancy, it would have been interesting to examine in what way they were involved in the children's development and the families' well-being. Future studies should preferably include them, which would give material for further research questions. Their transition to fatherhood could be explored, quantitatively and qualitatively, as well as their experiences of how the relationships with the mothers develop. It would be of special clinical interest if such studies focused on families with baby worries.

Many studies show the importance of the therapeutic alliance, a finding highlighted also in this study. Further investigations of the interplay between participants in treatment could give us deeper knowledge of the mechanisms of change in parent-infant psychotherapy. One final

reflection; this study compared one treatment mode, MIP, with ordinary treatment. It would be interesting to also compare this with other therapeutic methods for infants and parents.

## 12 SVENSK SAMMANFATTNING - SWEDISH SUMMARY

Avhandlingen är en långtidsuppföljning av en grupp mödrar och spädbarn med ”baby worries” dvs. problem ang. barnet, moderns välbefinnande eller mamma-barnrelationen. De deltog i en RCT studie när barnen var i genomsnitt 5 månader gamla. Vid en jämförelse mellan Mother-infant psychoanalysis (MIP) och sedvanlig behandling vid barnavårdscentral, Child health centre care (CHCC), fann man efter sex månaders behandling skillnader till förmån för MIP gruppen ang. mödrarnas psykiska välmåga, relationen mellan mor och barn samt moderns sensitivitet för barnets signaler. Av de 80 randomiserade mor-barnparen studerades nu de 66 par som var kvar i studien när barnen var 4.5 år, vilket gav en svarsfrekvens på 82,5 %. Avhandlingen hade två syften: (A) Att undersöka långtidseffekter av MIP jämfört med CHCC. Detta innebar att jämföra (1) barnens sociala, emotionella och kognitiva fungerande, anknytningsrepresentationer och psykiska välbefinnande, (2) mödrarnas psykiska välbefinnande och representationer av sitt barn samt (3) mor-barn interaktionen. (B) Att beskriva och få en förståelse för mödrarnas och analytikernas upplevelse av det terapeutiska arbetet i MIP och vad de fann givande resp. utmanande i behandlingen.

**Material och metoder:** Det första syftet uppnåddes genom att modern besvarade frågeformulär om sitt psykiska välbefinnande och barnets sociala och känslomässiga fungerande när barnet var 3.5 år resp. 4.5 år. Dessutom intervjuades varje mor-barn-par när barnet var 4.5 år. MWS intervjuade då barnet och forskaren i RCT-studien mamman. Barnet bedömdes utifrån flera källor; modern, förskolepedagogen, MWS samt externa skattare av bedömningsinstrumenten. Moderns representation av sitt barn skattades vid en semistrukturerad intervju. Mor-barn interaktionen bedömdes via videoinspelad samspelssituation. Det andra syftet uppnåddes genom kvalitativ tematisk analys av videoinspelade intervjuer med 10 MIP mammor och deras terapeuter efter 6 månaders behandling.

**Instrument:** Ages and Stages Questionnaire: Social Emotional (ASQ:SE), Children’s Global Assessment Scale (CGAS), Emotional Availability Scales (EAS), Edinburgh Postnatal Depression Scale (EPDS), kvalitativa bedömningar av barnen (Idealtyper), Machover Draw-a-person testet, Story Stem Assessment Profile (SSAP), Strengths and Difficulties Questionnaire (SDQ), Symptom Check List-90 (SCL-90), Swedish Parental Stress Questionnaire (SPSQ), Wechsler preschool and primary scale of intelligence (WPPSI-III), Working Model of the Child Interview (WMCI) samt information om bakgrundsfaktorer insamlade under intervjuerna. Dessutom användes transkriberade intervjuer med mödrar (videoinspelning) och deras terapeuter (ljudinspelning).

**Resultat:** (A) De kvantitativa bedömningarna visade signifikanta skillnader till förmån för barnen i MIP-gruppen på två intervjuarbedömda variabler: CGAS samt Idealtyper. MIP-barnen visade således bättre fungerande på diversifierade, globala mått. Det psykologiska tillståndet hos båda gruppernas mödrar låg nu, 3.5 efter behandling, på nivåer motsvarande normalpopulationen medan MIP-mammorna haft lägre depressionsmått vid alla uppföljningstillfällena. Deras känslighet för barnets signaler förbättrades också snabbare än CHCC-mammornas.

(B) De kvalitativa analyserna av transkriberade intervjuer med MIP-mödrar efter sex månaders behandling gav två teman. Temat ”övergång till moderskapet” refererade till hur kvinnan i behandlingen utvecklade en identitet som mor där hon också kunde se sitt barn som en egen individ. Temat ”relationen med barnet och andra” handlade om hur relationerna utvecklades med barnet och barnafadern samt personer i hennes tidigare liv, främst den egna

modern. De flesta mödrarna uppskattade att analytikern vände sig till både mor och barn. Det fanns också de som upplevde att för litet fokus lades på deras egna problem.

Analys av analytiker-intervjuerna gav två teman. Temat "Mor och barn tillsammans i MIP" innehöll analytikerns arbete med mor och barn samt att finna en balans mellan dem. Under temat "samarbete i MIP" beskrevs hur analytikern strävade att hålla ("härbärgera") modern och hur den terapeutiska alliansen utvecklades. I de fall där modern uttryckt missnöje med baby-fokus, hade även analytikern uppmärksammat detta.

**Slutsatser:** MIP-mammorna tycks ha blivit mindre nedstämda under barnets första uppväxtår och mer känsliga för dess signaler. Dessa positiva effekter uppnåddes tidigt i barnens utveckling och kan därför ha bidragit till att de visade tecken på ett bättre allmänt fungerande och bättre psykiskt välbefinnande när de blivit 4.5 år gamla. Upplevelsen av MIP-behandlingen var i allmänhet positiv hos både mödrar och analytiker. Den terapeutiska alliansen betonades av båda parter som betydelsefull. I vissa fall skulle metoden dock behöva modifieras och inriktas mer på moderns egna behov. Barnafadern deltog i vissa fall under någon eller några sessioner. Att utveckla metoden till att också involvera fadern skulle kunna vara en framtida möjlighet för att hjälpa dem utvecklas som familj.

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